PRELIMINARY ASSESSMENT/VISUAL SITE INSPECTION REPORT
FOR
ROUGE STEEL COMPANY
3001 MILLER ROAD
P. O. BOX 1699
DEARBORN, MICHIGAN
EPA ID NO. MID087738431

Submitted to:

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Region 5 DW-8J
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Submitted by:

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I. EXECUTIVE SUMMARY

The RCRA Facility Assessment (RFA) is the first step in implementing the corrective action provisions of the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA). The purpose of the RFA is to identify environmental releases or potential releases from solid waste management units (SWMUs) and areas of concern (AOCs) that may require corrective action by the facility owner. A preliminary assessment/visual site inspection (PA/VSI) is a form of an RFA suitable for implementing the corrective action provisions of HSWA. This PA/VSI Report constitutes the reporting requirement for the RFA at Rouge Steel Company in Dearborn, Michigan.

A preliminary assessment (PA) of the available U.S. Environmental Protection Agency (U.S. EPA) and State of Michigan file materials was conducted to familiarize the TechLaw, Inc. (TechLaw) Team with past compliance history, evidence of past releases, potential migration pathways, potential for exposure to any released hazardous constituents, closure methods and dates, citizen complaints, manufacturing processes and waste management practices at the Rouge Steel facility. A Visual Site Inspection (VSI) was conducted on May 31, 2000 thru June 2, 2000 by a TechLaw, Inc. (TechLaw) Team to identify and characterize SWMUs and AOCs. File material was provided to the TechLaw Team during the VSI by Mr. Don Windeler, Environmental Engineer at Rouge Steel. Photographs were taken during the VSI and are documented in Appendix A. The VSI Field Notebooks are included in Appendix B, and a site map showing SWMU and AOC locations is presented in Appendix C.

A total of 60 SWMUs and 5 AOCs were identified during the PA/VSI. These are described in more detail in Sections III and IV of this report. The units identified in the Coke Plant and By Products Area were not in operation during the VSI. A PA/VSI report dated May 6, 1987, identified 24 SWMUs and no AOCs. These units were numbered 1 thru 24, and those original numbers are identified in the SWMU descriptions. The SWMUs in this report are numbered according to the plant and/or process that they are associated with. For example, the SWMUS associated with the Coke Plant are numbered CP 1, CP 2, CP 3, etc. The subunits are identified within the SWMU description (i.e. CP 1a, CP 1b, CP 1c, etc.). Also, releases associated with several units were identified during the PA/VSI.

A Consent Order was issued to Rouge Steel by the Michigan Department of Environmental Quality (MDEQ) on May 8, 2000. According to Section 8.7.1 in the Order, it had not been determined if the Schaefer Road Area is part of the property identified in the order. The property identified in the Order refers to both the Rouge Steel plant and the Ford Plant. Furthermore, Sections 8.7. 2 thru 8.7.4 of the Order state that any corrective actions or response activities at the Schaefer Road Area will be addressed under Part 201 of the Michigan Natural Resources and Environmental Protection Act (NREPA) through a workplan. This workplan will include a schedule for investigation and remediation by Rouge Steel and Ford. Therefore, the Schaefer Road Wastewater Treatment Plant (SRWWTP) was not identified as a SWMU during the PA/VSI, but the wastestreams that are treated here have been included in this report. Also, any -

SWMUs that are located at this unit were not identified in this report. Three USTs, WOT-1, WOT-2, and WOT-3 are located at the SRWWTP, but they were not identified as SWMUs in this report.

An information request was sent out, but at the time of this report, Rouge Steel had not responded.

II. SITE DESCRIPTION

The Rouge Steel facility is located at 3001 Miller Road in a commercial/industrial area of Wayne County in Dearborn, Michigan. The facility is bordered by the Rouge River on the south, Interstate 94 on the north, Schaefer Road on the west, and Miller Road on the east. The facility is located 2.8 miles upstream from the confluence of the Detroit and Rouge Rivers.

The Ford Motor Company Rouge River Complex is approximately 1200 acres, and the Rouge Steel Company is approximately 350 acres in size. According to a RCRA inspection performed on September 15 -17, 1998, the Rouge Steel facility consists of three decommissioned coke oven batteries and a coke by-products recovery plant, three blast furnaces, two basic oxygen furnaces, an electric arc furnace, which is no longer operational, two ladle metallurgical facilities, three continuous casting machines, one hot strip mill, and one cold roll mill. The facility also consists of a former slabbing mill. The facility is completely fenced with security guards posted at the gates.

The facility began operations in 1919. On, January 1, 1982, the Ford Motor Company formed Rouge Steel Company as a wholly owned subsidiary. Rouge Steel Company's stock was sold to Marico Acquisition Corporation on December 15, 1989, and Rouge Steel has operated as an independent company since this sale. Currently, approximately 3,100 people are employed at the facility.

Rouge Steel Company manufactures hot rolled and cold rolled carbon steel strips. Currently, the Blast Furnace Plant, the Basic Oxygen Furnace (BOF) building, Continuous Caster Plant, Hot Strip Mill, and the Cold Rolling Mill are the primary facilities involved in the production of steel. At the Blast Furnace, iron ore, limestone, and coke are placed in the top of the furnace and heated air is blown into the bottom. The coal provides the heat that transforms the iron ore and limestone into molten iron. Molten slag floats on top of the molten iron and is subsequently removed from the bottom of the furnace. The molten slag is transported in ladle cars to the BF Slag Pit (SWMU BF 2). From July 1953 until an unknown date, the Sinter Plant, which was located at the northern end of the boat slip, was used to make clinker for the Blast Furnaces from iron oxide and slag. At the time of this report, it had not been determined as to when this plant was dismantled. Currently, the Blast Furnace Wastewater Treatment Plant (BFWWTP) (SWMU BF 1) is located where the Sinter Plant was.

The molten iron is transported in ladle cars to the BOF, where it is poured into the furnace along with scrap steel, and fluxes. Oxygen is then blown into the bottom of the furnace through a water cooled lance. Subsequently, impurities are burned off when the molten metal and the hot gases come in contact with one another. Alloys including limestone, burnt lime, dolomite, and fluorospar, are added, and the steel is tapped. The molten steel that results is transported in the ladle cars to the Ladle Refining Stations at the Continuous Caster Plant where refinements are made to bring the steel up to certain specifications. Again, the molten slag that rests on the top is transported to the BOF Slag Pit (SWMU BOF 8).

From 1976 to 1992, the Electric Arc Furnace (EAF) was used to produce molten steel from cold steel scrap, iron charge, and fluxes. The heat for melting the scrap steel, iron, and fluxes was supplied by passing an electric current through the scrap between three cylindrical carbon electrodes which were inserted through the furnace roof. The molten steel resulting from this process was then transferred to the Continuous Caster Plant or poured into the iron molds to form ingots.

The molten steel is transferred in ladle cars to the Continuous Caster Plant. At the Continuous Caster Plant, the hot molten steel is poured from the ladle into a refractory line tundish. The tundish provides a constant head of molten steel, which provides a constant casting rate. From the tundish, the molten steel is poured into copper molds, where partial solidification occurs. Lubricants are sprayed into these molds to facilitate movement. As the partially solidified steel is withdrawn from these molds, it is sprayed with water to remove heat so that it can completely solidify. The solidified slabs of steel are then cut into the desired length. The process wastewater that results is piped to the Continuous Caster Recycle System (SWMU CCS 2) for treatment and recirculation back into the Continuous Caster Plant.

The slabs from the Continuous Caster Plant are then transferred by mobile carrier to the piler at the entry end of the reheat furnaces at the Hot Strip Mill. The slabs are then placed in three walking beam reheat furnaces where they are heated to desired rolling temperature. The heated slabs are then passed through four roughing mill stands where the scale is removed by high pressure sprays to reduce the slabs' thickness. The resulting steel strips are then passed through seven finished stand rollers where the thickness of the slab is further reduced. The steel strips are now a steel coils, and they continue across the run-out table where they are sprayed with water to cool it to the desired temperature.

The steel coils are transported to the Cold Rolling Mill where they are passed through three pickling lines. As the steel coils pass through the pickling lines, hydrochloric acid is sprayed to remove scale and other oxidizing impurities. Next, the coils are spray-coated with corrosion resistant oil. At this point, some of the coils are packaged and shipped to customers. The thickness of the remaining coils is further reduced by the cold rolling operations. In the cold rolling operation, the coils are sent through the tandem mills, annealing furnaces, and the temper mills. In the tandem mills, the coils are compressed between rolls to reduce the thickness while introducing the desired physical, mechanical, and surface properties. At this point, the coils have been reduced by 50 to 70 percent, but ductility of the steel has also been reduced. To increase the ductility of the steel, the steel coils are heated in the annealing furnaces to approximately 1300°F for 25 to 45 hours. Next, the steel coils are rolled in temper mills that reduce the steel strip by one to two percent in order to improve the surface texture and the forming qualities of the steel. Lastly, the steel coils are sent through two slitters and then shipped to customers. The Cold Rolling Mill was originally constructed in the 1920s, but a new Cold Rolling Mill was installed in the 1960s.

According to memorandum from FIT to U.S. EPA, from 1915 to 1956, various wastes from plant operations were landfilled onsite including tar sludge, construction and excavation wastes. The memorandum states that FIT files do not indicate the exact locations of these landfill activities.

From the 1920s to 1987, Rouge Steel produced its own coke. Coal was delivered to the facility in a boat and stored at the Hi-Line Area and on Miller Road until needed. From these storage areas, the coal was sent to the breaker building in hoppers on a conveyor. At the breaker building, a perforated drum, the breaker, broke the coal into fine pieces. The coal exited from the bottom of the breaker building to the top of the mixing building. In the mixing building, different types of coal were mixed for the foundry and the blast furnaces on a mixing belt. From the mixing belt, the coal fell into a pulverizing hammer mill. From the hammer mill, the coal fell into a spiral conveyor where it was carried to bucket elevators. The bucket elevators carried the coal upward 178 feet in the mixing building where it fed a conveyor which traveled to a charging bunker above "A" and "B" battery or to a charging bunker above "C" and "D" battery. From the bunker building, the coal was charged into the coke battery ovens through charging holes. The coal for the BF was coked for 16 ½ hours, and the coal for the foundry furnaces was coked for 28 hours. From the coke ovens, the coke was placed in a quench car, and quenched at the North and South Quench Stations (SWMU CP 1). After quenching, the coke was dumped on the wharf where the coke for the BF and the foundry furnaces were separated.

Coke oven gas was extracted from the coke ovens and piped to the coke by-products recovery plant for cleaning and subsequent extraction of products. Cleaning the coke oven gas involved the extraction of tar, naphthalene, ammonia liquor, and light oil products. The naphthalene was shipped offsite. The ammonia liquor was later processed into ammonia vapor for use in the production of ammonium sulphate. The tar and the light oil were stored onsite. The clean gas flowed to an underground holder where it was mixed with BF gas and stored for use throughout the Rouge Plant. A small portion of this gas was pumped to the main line for use in the coke ovens.

The coke ovens and the by-products recovery plant were originally built in the 1920s. The following table gives a historical overview of the coke ovens:

Coke Ovens	Original Date of Operation	Modification Date
"A" Battery- 45 Ovens	February 16, 1937	Rebuilt 45 ovens- August 22, 1964
"B" Battery- 61 Ovens	February 23, 1937	Rebuilt- March 4, 1962
"C" Battery- 61 Ovens	May 18, 1939	Rebuilt- August 11, 1963 and 1986
"D" Battery- 37 Ovens	October 16, 1952	
"Dx" Battery- 25 Ovens	March 3, 1963	

According to the information response submitted on November 30, 1998, during shutdown

procedures of the Coke Plant and By Products Area (AOC D), the tanks were pumped out, the products were sold, and the wastes were sent offsite to a licensed waste disposal facility. The Coke Oven Light Oil Muck Tanks (SWMU CP 5) and the Coke Oven Gas Drip Water Tanks (SWMU CP 2) were visually inspected after the shutdown procedures and they were found to be residual free. The Coke Oven Tar Sludge Decanter Box (SWMU CP 3) was also visually inspected and no residual materials were found in the unit.

Also during shutdown procedures, all of the gas lines in the Coke Plant and By Products Area (AOC D) were blanked off and then purged with nitrogen gas. Certain portions of the by products area were steam cleaned and drained, including the primary cooler, tar precipitator, the AC stills, the final coolers, and the light oil still. The wash oil spiral coolers were cleaned with high pressure water and then drained. The drains and drain valves to all the tanks in this area were closed. According to the response to the information request, details on the exact procedures followed during shutdown of the area are not available. Therefore, it is not known if any sampling was performed in this area.

From 1963 to 1985, the molten iron from the blast furnaces was poured into iron molds to make ingots, lumps of steel weighing 10 to 25 tons each. These ingots were produced in the Ingot Mold Foundry by pouring the molten iron from the blast furnaces into sand molds. The molten iron was allowed to solidify before being used to cast steel ingots from the molten steel from the BOF. The spent sand from this operation was stored at the Spent Mold Foundry Sand Pile (SWMU MIS 8) and then disposed offsite. The steel ingots were then transferred to soaking pits, which operated from 1953 to 1985, in order to be heated to the desired rolling temperature before being transferred to the Former Slabbing Mill.

Prior to the BOF, from 1925 to 1965, the Open Hearth was used to transform the molten iron into molten steel. From the Open Hearth, the molten steel was transferred to the Blooming Mill and the Billet Mills where it was rolled into a billet and then a bar prior to being transferred to the Hot Strip Mill. The Open Hearth furnaces were originally installed between 1926 and 1930. They were rebuilt between 1948 and 1954, and they were removed in 1965 and replaced with the BOF. The Blooming Mill began operation on September 25, 1935 and was modified between 1953 and 1960. The Billet Mills began operation on March 29, 1926 and were modified in 1948.

The Former Slabbing Mill was not installed until the 1960s. According to the facility representative, the Former Slabbing Mill replaced the Blooming Mill. The Former Slabbing Mill was the initial rolling step for the steel ingots. After the ingots were heated in the soaking pits, they were transferred to a 48 by 96 inch universal mill were the ingot was reduced from a 37 by 68 by 96 inch block of steel to a slab that measured 8 inches high, 5 feet wide and 37 feet long. The slab was then passed through a scarfer to burn about 1/32 of a inch from all four sides to remove surface imperfections. After the slab passed through the scarfer, the slab was cut into two 16 foot sections by a hydraulic sheer. The scarfer material was transferred through a trench from the scarfer to the Former Scarfer Grit Scale Pit (SWMU FSM 3) and the wastewater from

the scale removal was transported to the Former Slab Mill Scale Pit (SWMU FSM 1). The wastewater from the Former Scarfer Grit Scale Pit and the Former Slab Mill Scale Pit were then piped to the SRWWTP prior to discharge into the Rouge River.

Bar Mills were originally used as early as 1925 at the Rouge Steel facility. They consisted of three mills: 14" Merchant Mill, 12" Spring Mill, and a 10" Rod Mill. The Merchant Mill began operation on November 23, 1925 and was removed between December 1964 and May 1965. The Spring Mill began operation on December 16, 1927, and the Rod Mill began operation on June 14, 1928 and was removed in September 1959. It could not be determined from the available file material when the Spring Mill was removed.

The following hazardous waste streams are no longer generated at the facility. According to the facility representatives, all of these waste streams were disposed offsite:

- Coke oven gas drip water (D003) was generated when moisture in the coke oven gas condensed, collected in the Coke Oven Drip Water Tanks (SWMU CP 2), and was then used at the North and South Quench Stations (SWMU CP 1) to quench hot coke.

- Tar decanter sludge (K087) was generated during the extraction of tar from the coke oven gas and stored in the Coke Oven Tar Sludge Decanter Staging Area (SWMU CP 4) prior to being rerouted to the Coke Oven Tar Sludge Decanter Box (SWMU CP 3). From 1915 until 1956, the tar sludge (K087) was stored at the Former Tar Sludge Landfill (SWMU EAF 1).

- Light oil muck (D003) was generated from decanting the wash oil used to wash the coke oven gas and then stored in the Coke Oven Light Oil Muck Tanks (SWMU CP 5).

- Final cooler water (D003) from the Coke Plant and By Products Area (AOC D) was treated and disposed of in the Injection Well System (SWMU CP 9).

- EAF dust (K061) generated during the production of steel from cold steel scrap, iron charge, and fluxes in the Electric Arc Furnace, was managed by the EAF Silo (SWMU EAF 2) and the EAF Shop Hopper (SWMU EAF 3).

- Water and PCB contaminated oil from leaking transformers in substation 12B of the Cold Rolling Mill was stored in the PCB Contaminated Oil UST (SWMU CRM 1).

- Spent methylene chloride and tetrachloroethylene (F001) generated in the dip degreaser at the Oxygen Plant for parts cleaning, was stored in the Methylene Chloride Drums - Oxygen Plant (SWMU MIS 6).

The following non-hazardous waste streams are no longer generated at the facility. These waste streams were disposed of offsite:

- Flushings from the cleaning of the north spiral cooler were collected in the 300 Gallon Hazardous Waste Tank (SWMU CP 6).

- Oil, de-emulsifier, and contaminated waste oil from the piston sealant system of the coke oven gas holder was stored in the Coke Oven Gas Holder Waste Tanks (SWMU CP 10).

- Mine refuse that included wood, slate, shale, rock, etc. was store at the GG Building Coal Picking Refuse Pile (SWMU CP 11).

- Coke Oven refractory liners that contained silica with ceramic binders were stored at the Coke Oven Refractory Refuse Pile (SWMU CP 12).

- AC Still Bottoms, diammonium phosphate effluent, and light oil plant wastewater was pumped to the Coke Oven Biological Wastewater Treatment Plant (SWMU CP 8).

- Steel pellets that were produced from blasting the surfaces of the tandem mill rolls were stored at the Roll Shop Silo and Dust Box (SWMU CRM 6).

- Used oil generated throughout the facility was stored in Used Oil Dempsters (SWMU MIS 7).

- Spent mold foundry sand generated from making iron ingots was stored at the Spent Mold Foundry Sand Pile (SWMU MIS 8).

- Wastewater from the Former Slab Mill Scale Pit (SWMU FSM 1) and the Former Scarfer Grit Scale Pit (SWMU FSM 3), was conveyed through Sewer Lines (SWMU MIS 5) to the SRWWTP.

The following are the hazardous streams that are currently generated at the facility and disposed offsite:

- Spent pickle liquor (K062) generated during the removal of scale and other oxidizing impurities from the steel strips at the pickle lines are stored in the Spent Pickle Liquor Holding Tank (SWMU CRM 3) and then piped to the <90 Day Storage Tanks (SWMU CRM 4).

- Xylene (F005), toluene (F003), and other D001 wastes are stored at the <90 Day Hazardous/Non-hazardous Waste Area (SWMU MIS 2).

- PCB filled drums and debris, used transformers, and samples taken for dielectric strength and moisture were managed at the PCB Storage Building (SWMU MIS 4).

- Spent Mineral Spirits (D001) from the Parts Cleaners (SWMU MIS 9) are disposed of offsite by Safety Kleen or the facility.

The following is a list of non-hazardous waste streams that are currently generated at the facility and disposed of offsite.

- Wastewater from the Blast Furnace Wastewater Treatment Plant (BFWWTP) (SWMU BF 1) and the North and South Hot Strip Mill Scale Pits (SWMU HSM 1) is conveyed through Sewer Lines (SWMU MIS 5) to the SRWWTP.

- Blast Furnace slag generated in the Blast Furnaces is stored at the Blast Furnace Slag Pit (SWMU BF 2).

- The blast flue dust from the Flue Dust Catcher (SWMU BF 3), is stored at the WOF Stockpiled Material (SWMU MIS 11) for use in the Waste Oxides Facility to make briquettes to be used in the Blast Furnaces. Coke breeze and iron ore fines are also stored as WOF Stockpiled Material.

- Kish and desulfer dust from the Kish Hopper (SWMU BOF 5) and the Desulfurization (D/S) Hopper (SWMU BOF 3) were stored at the Waste Material Accumulation Pile (SWMU BF 4). Presently, these dusts are stored at the New Debris Pile (SWMU MIS 10). Kish dust is generated during reladling at the Basic Oxygen Furnaces and the desulfurization dust is generated during the desulfurization process. Also, ladle refining and vacuum degasser dust from the Ladle Refining Facility No. 1 and the Vacuum Degasser System Baghouse (SWMU LRF 2) and the Ladle Refining Facility No. 2 Baghouse (SWMU LRF 3) are stored at the New Debris Pile.

- Lime dust generated when lime is dumped into a hopper for use in the Basic Oxygen Furnaces is stored in the Lime Dust Hopper (SWMU BOF 1).

- Fine and course dust particles generated during the conversion of molten iron into steel in the Basic Oxygen Furnaces are stored at the Course and Fine Dust Silo (SWMU BOF 4).

- Molten iron and slag generated from the cleaning the ladles cars is managed in the Ladle Dumping Operation Pits (SWMU BOF 2).

- BOF slag and metal generated during the desulfurization process is stored at the BOF Slag Pile (SWMU BOF 6).

- Skulls, metal that adheres inside the ladles, are stored in the BOF Slag Pit (SWMU BOF 8).

- Solids and dissolved gases from contact water generated in the Vacuum Degassing Process is handled by the Vacuum Degasser Recycling System (SWMU LRF 1).

- Blowdown from the Continuous Caster Recycle System (SWMU CCS 2), storm water and non-contact cooling water generated throughout the facility are managed in the 12A Lagoon (SWMU CCS 1).

- Scale removed from the North and South Hot Strip Mill Scale Pits (SWMU HSM1) and the CCS East and West Scale Pits (CCS 2b and 2c) that will be used as feedstock in the WOF is stored in the Slab Mill Scale Piles (SWMU FSM 2).

- Oily wastes generated in the Cold Rolling Mill are stored at the Tandem Mill Sump Oil Tanks (SWMU CRM 5), J-9 Sludge Box (SWMU CRM 7), Scrap Oil Drums (SWMU CRM 8), Z-46 (Z-47) Waste Oil Tanks (SWMU CRM 9), and the Cold Mill Sumps (SWMU CRM 10).

- Spent oil generated from vehicle maintenance is stored in the Hi-Lo Waste Oil Tank (SWMU MIS 3).

- Rinse water from the pickling lines in the Cold Rolling Mill are managed by the North and South Neutralization Areas (SWMU CRM 2) and piped through the Sewer Lines (SWMU MIS 5) to the SRWWTP.

The following table summarizes all the USTs that have been closed and/or removed at the facility. This material is taken from Notifications for Underground Storage Tanks and Registrations for Underground Storage Tanks completed by Rouge Steel dated May 5, 1986 and February 14, 1996. According to the facility personnel, all of the USTs at the facility have been removed or closed by the facility:

UST Name	Product Stored	Capacity (gallons)	Construction Materials	Year of Installation	Closure Status/Date
HLS-1	Diesel	2,000	Fiberglass Reinforced Plastic	1983	Removed on June 26, 1990
HLS-2	Diesel	10, 000	Asphalt Coated Steel	1958	Removed on November 21, 1989
EAF-1	Diesel	1,000	Fiberglass Reinforced Plastic	1980	Removed on January 25, 1991

UST Name	Product Stored	Capacity (gallons)	Construction Materials	Year of Installation	Closure Status/Date
WOT-1	Used Oil	4,000	Steel	1969	Removed on December 20, 1991
WOT-2	Used Oil	10, 000	Steel	1964	Removed on December 20, 1991
WOT-3	Used Oil	10,000	Steel	1973	Removed on December 20, 1991
BOF UST (AOC F)	Diesel	1,000	Steel	Unknown	Closed in place on November 30, 1999
PCB-Contaminated Oil UST (SWMU CRM 1)	Used oil with PCBs	1,000	Steel	1927	Closed in place on February 9, 1996
Coke Oven Gas Drip Water Tanks (SWMU CP 2)	Coke Oven Gas Drip Waste (D003)	2-2,000 2-1,500 1-1,000	Steel 2-Fiberglass	1973	Stopped use in 1987

Regulatory History

On July 25, 1977, Michigan Department of Natural Resources (MDNR) submitted a letter to U.S. EPA Region 5 stating that the Rouge Complex was in violation of its NPDES permit No. MI0003361.

On August 19, 1977, Final Order No. 1929 was issued against the Ford Motor Company for the Rouge Steel Plant. It was ordered that the NPDES Permit No. MI0003361 issued on December 26, 1974, and modified on September 22, 1977, was in full force except as modified by the Final Order until October 31, 1979, when the NPDES Permit expired. Ford was also ordered to treat and control their wastewater discharge to the extent necessary to achieve and maintain the final limitations and conditions as specified in the Final Order.

According to the findings of fact presented in the May 8, 2000 Consent Order, on August 11, 1980, Ford Motor Company filed a Notification of Hazardous Waste Activity for the Steel Division, the successor of Rouge Steel, with the U.S. EPA. In the notification Ford indicated that the Steel Division generates, treats, stores, or disposes of hazardous waste.

On November 17, 1980, Ford submitted Part A of its RCRA permit application for the Injection Well System (SWMU CP 9). On the Part A, Ford identified D003 as the type of waste that would be injected. The general section of the Part A was resubmitted on March 24, 1982 to reflect Ford changing its Steel Division to Rouge Steel.

In a letter dated April 15, 1982, Rouge Steel informed MDNR of the change of ownership for the deep disposal wells at that Injection Well System (SWMU CP 9) had been changed from the Ford Motor Company to them. This effected permit numbers 09736882 for the old well (deep disposal well No. 1) and 184754882 for the new well (deep disposal well No. 2). In the letter, these wells are numbered 1-009 and 2-184 respectively. There was no other information regarding these permits in the available file material.

According to the file summary in Complainant's Exhibit 13, MNDR sent Rouge Steel a notice of violation on February 19, 1982 for illegally disposing of hazardous waste leachate from the Allen Park Clay Mine Landfill in the Injection Well System (SWMU CP 9).

There have been several RCRA inspections conducted at Rouge Steel by MDNR on behalf of U.S. EPA. According to a file summary in Complainant's Exhibit 13, RCRA inspections were conducted on September 20, 1982, September 21, 1983, October 8 and 10, 1984, May 21, 1985, and March 14, 1986. The facility was also inspected on September 21, 1988, December 1-3, 1992, and September 15-17, 1998. Violations were identified during the inspections that occurred on September 20, 1982, October 8 and 10, 1984, March 14, 1986, and September 21, 1988. Most of the violations were minor, but major violations were observed during the inspections conducted on October 8 and 10, 1984 and March 14, 1986. A letter dated October 14, 1984 in the information response, explains that tar spillage was noticed in the tar pitch loading area during the inspection on October 8 and 10, 1984. In the information response, correspondence dated April 15, 1986 explains that tar pitch spillage was observed around the Coke Oven Tar Sludge Decanter Box (SWMU CP 3) during the inspection on March 14, 1986. Also, the Coke Oven Tar Sludge Decanter Staging Area (SWMU CP 4) was identified as a surface impoundment during this inspection. The details of these violations are explained further in the Release History and in the SWMU Descriptions.

Rouge Steel has submitted several Notifications of Hazardous Waste to U.S. EPA identifying different waste types. On May 31, 1989, Rouge Steel identified F001, K061, an K062 as hazardous wastes that were generated, and D001, D002, and D003 were listed as characteristics of nonlisted hazardous wastes. On January 12 and April 6, 1990, Rouge Steel identified F001 wastes and identified D001, D002, and D000 as characteristics of nonlisted hazardous wastes.

According to the available file material, there have been several instances of noncompliance with the facility's NPDES Permit. The facility was issued notices of noncompliance on October 18, 1988 and June 28, 1989, and Rouge Steel sent letters to MDNR on November 12, 1991, March 9, 1993, and November 10, 1995 stating that it had exceeded its permit limits.

The following permits have been issued to the Rouge Facility in Dearborn:

NPDES Permit No. MI0043524 was issued by MDNR on July 19, 1984, and the permit was modified on February 26, 1988 for the discharge of treated wastewater into the Rouge River. According to the available file material, new permits were issued on August 17, 1989 and on

July 22, 1997 and modified on June 11, 1999. In a letter dated February 11, 2000, Rouge Steel requested that the NPDES permit be modified to include Outfall 006 as preparation for the start up of the new co-generation power plant. The file material did not indicate if this modification occurred.

UIC Permit No. MI-163-1W-002 was issued on October 11, 1985 and modified on April 22, 1986 for the deep disposal of hazardous waste in deep disposal well No. 2 at the Injection Well System (SWMU CP 9). The injection of hazardous waste ceased in 1987 when the Coke Plant closed. From the available file material, it appears that this permit was issued after Permit No. 09736882. It could not be determined from the available file material if a new permit was issued for deep disposal well No. 1. It is highly unlikely that a new permit was issued for deep disposal well No. 1 because it stopped operation in 1984.

On April 27, 1992, the Department of the Army, issued Federal Permit No. 89-009-003-1 to Rouge Steel that allowed them to mechanically dredge 2,000 cubic yards of material from a 2,600 by 250 foot boat slip of the Rouge River to a depth of 23 feet below Low Water Datum of 570.5 feet. The permit also allowed Rouge Steel to dredge a maximum of 2,000 cubic yards of material every two years for a ten year period. The permit expires on December 31, 2002.

On May 8, 2000, Consent Order WMD 111-04-00 was issued to Rouge Steel, Ford Motor Company, and MDEQ. The order became effective on April 28, 2000. The objectives of the Order are as follows:

- Rouge Steel and Ford are to conduct RCRA corrective action at known and identified waste management units (WMUs) and areas of concern (AOCs).
- Rouge Steel and Ford are to clean any contaminants that might exist at the WMUs and AOCs.
- MDEQ is to act as the lead during the corrective action and clean up procedures, to facilitate the efforts for the restoration of the Rouge Manufacturing Complex as part of the Rouge Heritage 2000 Project, and to perform corrective action in accordance with RCRA Section 3004(u).

Environmental Setting

The Rouge Steel facility is bordered by industrial properties and commercial land uses on all four sides of the facility. There are no sensitive environments/wetlands within a one-mile radius of the facility.

There are only two water wells within a two mile radius of the facility. One of the water wells has been plugged and abandoned, and the status of the other well is unknown. The plugged well is 125 feet deep and the other well is 112 feet deep. The purpose of these wells could not be determined from the available file material.

The nearest surface body to the facility is the Rouge River located approximately 100 yards to the southwest. There are no reported surface water intakes used for drinking water or drinking water wells within a 3-mile radius of the facility. The drinking water is primarily obtained from surface water sources supplied by the Detroit Metro Water Department. The surface water sources of water supply for the Detroit area include Lake St. Clair, Detroit River, Clinton River, Rouge River, Huron River, and inland lakes. The surface water is used a lot because it is readily available, and the groundwater quantities are limited. At the facility, water supplies are purchased.

The Rouge Steel facility is located on the southeastern side of the Michigan Basin. The Michigan Basin covers an area of approximately 122,000 square miles with its center and deepest part located in the central portion of the Southern Peninsula. In the Southern Peninsula, the Michigan Basin includes approximately 13,000 feet of consolidated sediments, including sandstone, limestone, dolomite, and shale. These sediments rest on Precambrian Granite. In the vicinity of the facility, the surficial sediments consist of glacial deposits of lacustrine and delta sand, lacustrine clay, and lacustrine and delta loam. These sediments were deposited during the Wisconsin age of the Pleistocene glaciation.

Groundwater at the facility has been encountered at 9 feet below the ground surface. A groundwater study was conducted at Ford's Allen Park Clay Mine Landfill facility which is located within a one mile radius of the facility to provide local groundwater information. From this study, it was discovered that shallow and deep glacial aquifer systems are present in the area were the facility is located. The Michigan Department of Public Health established that the shallow aquifers, located less than 25 feet below the ground surface, are not suitable for drinking water. The deeper aquifer system, which is located more than 70 feet below the ground surface is highly mineralized and would require treatment prior to use.

The monitor wells located at the Allen Park Clay Mine Landfill were used to measure the water elevations and determine groundwater flow. The water wells penetrate a local glacial artesian aquifer system more than 70 feet below ground level. The static water levels range from 505 feet to 522 feet above mean sea level, reaching a height of up to 12 feet above the existing ground surface. The groundwater in this aquifer is to the east-southeast.

Release History

On August 6, 1964, U.S. EPA communicated that Ford waste outlets were a major contributor of oil to the Detroit and Rouge Rivers. Ford was advised to take steps to reduce the amount of oil emitted to the Rouge River from its operations to the extent necessary to eliminate oil streaks and pools that accumulate in the river below the company outlets. On March 31, 1966, the Michigan Water Resources Commission (MWRC) adopted a Notice of Determination and Hearing against Ford asking them to comply with certain conditions and restrictions in order to eliminate the pollution of the Rouge River.

A MDNR memorandum dated January 10, 1977 describes an acid loss from pickle line no. 3 that occurred on January 7, 1977. An investigation by MDNR revealed that the overflow line, where spent acid overflows to the Spent Pickle Liquor Holding Tank (SWMU CRM 3), was blocked between pickle line nos. 2 and 3. Apparently, this blockage resulted in the spent liquor spilling onto the floor of the Cold Rolling Mill to the floor drains that lead to the North and South Neutralization Areas (SWMU CRM 2). Normally, caustic is added at these areas before discharge to the Schaefer Road Wastewater Treatment Plant. The North and South Neutralization Areas normally receive wastewater from fume scrubbers that do not contain iron. When the release occurred, the iron-laden acid was not neutralized enough to drop out the iron, which resulted in an orange discoloration of the Rouge River. This line was repaired on January 8, 1977.

According to a Ford memorandum dated April 23, 1981, a spill occurred at the Coke Plant and By Products Area (AOC D) when the drain on a line, used to pump light oil from the receiving tank to the storage tank, was not shut off. . The check valve on the storage tank failed and the light oil drained from the storage tank to the light oil sump. From the sump, the oil drained into the tailrace and ultimately into the Rouge River because the switch on the sump pump had been turned off. According to the memorandum, the switch was left on at all times from then on, and the sewer line from the water side of the pump was blanked and a steam syphon was used to keep the water at a safe level.

In the November 30, 1998 response to U.S. EPA's November 3, 1998 information request (hereafter referred to as the information response), correspondence dated October 15, 1984, November 14, 1984, and April 15, 1986, explains that during inspections performed by MDNR on October 8 and 10, 1984, a tar spillage was observed in the tar pitch loading area. According to the correspondence, there was also a visible evidence of naphthalene crystal release to the air. The correspondence did not indicate the quantity of tar that had been spilled in the loading area. Rouge Steel responded to MDNR's October 15, 1984 letter on November 15, 1984 stating that the tar spillage in the tar pitch loading area had been removed. Rouge Steel assured MDNR that the area would be maintained. Exhibit 13 in the complaint to Rouge Steel dated October 29, 1986 shows a May 21, 1985 letter explaining that the facility was reinspected on May 7, 1985. During the reinspection, it was found that the operating procedures at the tar pitch loading area had changed to control and prevent tar pitch spillage. The letter indicated that Rouge Steel intended to install new equipment to eliminate and control organic emissions. Rouge Steel was found to be in compliance during the reinspection.
A letter dated April 15, 1986 in the information response explains that tar pitch spillage was observed around the Coke Oven Tar Sludge Decanter Box (SWMU CP 3) during an inspection on March 14, 1986. Also during this inspection, the Coke Oven Tar Sludge Decanter Sludge Staging Area (SWMU CP 4) was identified as a surface impoundment. In Complainant's Exhibit 18, Rouge Steel responded in a letter dated May 15, 1986. In this letter, Rouge Steel states that the tar pitch is a product, not tar decanter sludge (K087). According to the letter, it was normal to dispose of any tar pitch spillage with the tar decanter sludge. The facility also reported that a

new steel plate was welded on the Coke Oven Tar Sludge Decanter Box (SWMU CP 3) to prevent further spillage. The facility further explained that a continuous concrete pad extended throughout the area of the Coke Oven Tar Decanter Sludge Staging Area. The use of this area was discontinued, and in the information response, on January 18, 1988, Rouge Steel informed MDNR that the Coke Oven Tar Sludge Decanter Staging Area was closed. On March 16, 1988, MDNR certified that the area had been clean closed.

Between July 1, 1987 and June 26, 1991, Rouge Steel submitted 15-day letters to U.S. EPA Region 5 with incident reports attached describing releases of EAF dust (K061) to the environment. There were releases of EAF dust (K061) from the pneumatic dust transport system, and the EAF Dust Silo (SWMU EAF 2). Some of the causes of these releases were failure of the level indicator on the surge hopper, failure of the seal on the No. 4 compartment rotary lock, and failure of the upper level limit on the EAF Dust Silo. During each release, there were no injuries, the release was confined to the EAF, and the released material was disposed of in a hazardous waste landfill offsite.

According to a Report of Oil, Salt or Polluting Material Losses completed by Rouge Steel on September 26, 1988, seal failure inside a bus transfer box occurred on September 16, 1988. According to this report, approximately 10.1 pounds of PCB fluid leaked across the bus transfer box into the control panel, where it collected in an outside dike. The PCB fluid was soaked up and contained using absorbent pillows. The report stated that a daily inspection of the unit will be conducted by Power Utility Operations until the unit is repaired and modified. The facility communicated in the report that a modification to the bus transfer box would prevent fluid leaks to the control panel and contain the PCB material within the dike.

In a letter to U.S. EPA Region 5 dated February 23, 1990, Rouge Steel submitted an incident report explaining that a release of one pint of mercury (U151) occurred at the Hi-Line Instrument Shop on February 15, 1990. According to the report, the glass container that stored the mercury was broken. The released mercury was confined to the Instrument Repair Shop and the adjacent lunchroom. One half a pint of mercury was recovered and placed in a 55 gallon drum along with contaminated rags from the clean up for disposal offsite.

On December 10, 1990, Rouge Steel informed the Michigan State Police Fire Marshall, (MSPFM) that an UST at the EAF was discovered leaking diesel fuel at a rate of 0.092 gallons per hour (GPH), which exceeds the state guideline of 0.05 GPH. This leak was discovered on October 18, 1990 during an UST precision test. Rouge Steel also informed the MSPFM of its intent to remove the tank. In August 1991, Rouge Steel prepared a tank closure and site assessment report regarding the removal of this UST. According to this report, the UST removal activities began on December 22, 1990 and were completed on January 25, 1991. During the removal activities, there was no visible evidence of any release noted by the contractor, but a very slight odor was detected. The tank and its associated pipes appeared to be in good physical condition at the time of the removal. On January 7, 1991, three slag samples were taken from below each end of the tank and analyzed for BTEX and Total Petroleum Hydrocarbons (TPH).

The analytical results exceeded the MDNR Act 307 Type B clean up standards. Therefore, on February 8, 1991, a contractor excavated the hydrogen impacted soil discovered during the removal of the tank. At this time, samples were taken to determine the vertical and horizontal extent of contamination. It was speculated that the soils were impacted because of the piping or the tank's joints. Five soil samples were collected and analyzed for BTEX and PNAs, and the analytical results were all below the Type B cleanup criteria specified by the Act 307 Rules. Therefore, remediation of this site was not required. One groundwater sample was collected, but the analytical results were also below the Type B cleanup criteria. The excavated soil and the crushed tank were transported to Wayne Disposal, Inc. for disposal. In April 1991, the excavation was backfilled with slag, which is a common fill material used at Rouge Steel. According to a letter from Rouge Steel to MDNR dated October 19, 1993, a hydrogeologic investigation was conducted at the EAF where the UST was removed on May 13, 1993. From this investigation, it was concluded that remediation was not necessary. It could not be determined from the available file material if MDNR approved of the removal and closure activities conducted on this UST.

Rouge Steel sent U.S. EPA Region 5 a spill report on July 16, 1991 concerning a release of hydrochloric acid from the No. 4 pickle line in the Cold Rolling Mill. According to the detailed spill report submitted by Rouge Steel to MDNR on July 26, 1991, the leak from the No. 4 pickle line was discovered at approximately 5:30 pm on July 13, 1991. This leak resulted in a release of 1663 pounds of hydrochloric acid to one of the Cold Mill Sumps (SWMU CRM 10) beneath the No. 4 pickle line. The released material subsequently ran into a concrete trench that lead to the South Neutralization Area (SWMU CRM 2b). From the South Neutralization Area, the released material flowed through the Sewer Lines (SWMU MIS 5) which lead to the SRWWTP. This leak occurred at the bottom of the No. 1 tank on this line. When the leak was discovered, the contents of the No. 1 tank were pumped into the Spent Pickle Liquor Holding Tank (SWMU CRM 3). Next, water hoses and emergency showers were turned on to run water beneath the No. 4 pickle line to dilute the acid and to rinse the No. 1 tank. Afterward, approximately 6,000 gallons of liquid was pumped out of the No. 2 tank into the Spent Pickle Liquor Holding Tank to stop any additional acid from reaching the No.1 tank. The flow of caustic solution to the South Neutralization Area (SWMU CRM 2b) was increased in order to neutralize the weak acid solution running into the sewer system. From the sewer system, the acid was piped to the SRWWTP and then to the Rouge River.

When the No. 1 tank was rinsed out, the hoses and emergency showers were turned off. The water flow from the No. 4 pickle line had been stopped, but the flow of caustic solution to the South Neutralization Area continued. As a result of the July 26, 1991 release, Rouge Steel initiated an engineering study of methods for retaining spills from the acid tanks in all three pickle lines. According to the spill report, a completed report on this study was to be submitted to MDNR by August 15, 1991. When the most appropriate method of containment was found, a construction schedule was to be developed and submitted to MDNR. This report on the containment study and the construction schedule for the containment structure was not located in the available file material.

There have been several releases of spent pickle liquor (K062) as a result of ruptured transfer pipes. According to incident reports submitted by Rouge Steel to MDNR and U.S. EPA Region 5 on September 23, 1991, May 13, 1992, and June 25, 1992, ruptured transfer pipes resulted in the release of spent pickle liquor (K062). On September 19, 1991 and again on June 25, 1992, approximately 5,000 gallons of spent pickle liquor was released, and on May 7, 1991, approximately 500 gallons of spent pickle liquor was released. During all three incidents, the spent pickle liquor (K062) was first released to a trench prior to being pumped to the North Neutralization Area (SWMU CRM 2a) for neutralization before being piped to the SRWWTP. The material that was not piped to the SRWWTP was pumped to the Spent Pickle Liquor < 90 Day Storage Tanks (SWMU CRM 4). These transfer pipes were subsequently repaired before being placed back into service.

Rouge Steel submitted an incident report to U.S. EPA Region 5 on February 24, 1992 describing the release of mercury (U151) in the Cold Rolling Mill. According to the incident report, approximately 2.5 pounds of mercury was released to the ground in the storage area at the south end of the annealing isle inside the Cold Rolling Mill. This material was contained and clean up immediately.

In a letter to MDNR dated July 30, 1992, Rouge Steel explained that on July 25, 1992, a ruptured feed line on the hydrochloric acid tank adjacent to the Cold Rolling Mill released 26,300 gallons of hydrochloric acid. The acid was reportedly neutralized as it flowed through the lime bed under the tank to a storm sewer. From the storm sewer, the material went to the SRWWTP and ultimately to the Rouge River.

There have been several upsets at the "C" Blast Furnace according to correspondence from Rouge Steel to MNDR on May 15, 1992 and correspondence from MDNR to Rouge Steel on September 16, 1992. According to the correspondence on May 15, 1992, the upset at the blast furnace occurred on May 8, 1992 as the result of opening the gas washer on the "C" blast furnace. According to the letter, the drain on the gas washer had been plugged, and when it opened up, water overflowed the weir box, spilled onto the ground, and entered the adjacent catch basin. According to the correspondence dated September 16, 1992, on August 20 and September 3, 1992, 18, 646 gallons of process water and approximately 80,000 gallons of cooling water, respectively, spilled from the gas washer. All three of these discharges ultimately flowed to the Rouge River.

In a letter to MDNR, dated November 5, 1992, Rouge Steel explained that on October 27, 1992, a tote bin containing Qwerl 599 RS, a temper mill lubricant, tipped over due to improper loading and unloading procedures. Approximately 188 gallons of the material spilled on the concrete floor and flowed into the storm sewer, but visual inspections indicated that the material did not reach the boatslip leading to the Rouge River. According to the manufacturer of this material, 188 gallons of this material contained 210 pounds of sodium nitrite. The released material was removed from the floor using Dura Soak mats, and an industrial cleaner vacuumed the material

from the storm sewer and manholes in the area. The material was subsequently sent to Rouge Steel's oil recovery contractor. As a consequence of this incident, Rouge Steel reviewed the supplier loading procedure and their unloading procedure to prevent this from recurring.

On June 11, 1993, Rouge Steel informed MDNR of a tanker accident that occurred on June 3, 1993. According to the correspondence, a Ford Motor Company Locomotive collided with an Eaglebrook, Inc. tank truck containing ferrous chloride inside the Rouge Steel plant near Gate 6. The tanker was dislodged from the tractor and it overturned and punctured. As a result, approximately 848 gallons of ferrous chloride, to be used in the pickle lines, was spilled to the pavement. Some of the spilled material flowed to a storm sewer, but sand was used to absorb and dike the rest of the material to prevent further drainage to the storm sewer. A clean-up contractor vacuumed eight catch basins in the storm sewer system. This storm sewer system consists of eight catch basins to connected to a ninth manhole leading to the main sewer system. This main sewer system flows south into the Roulo Creek. The Roulo Creek outfall was monitored, and from an analysis of the material in the storm sewer, no material reached the Roulo Creek outfall.

According to an incident report submitted by Rouge Steel to MDNR on June 7, 1994, a release of spent hydrochloric acid occurred on May 29, 1994. According to the report, the release occurred while the spent hydrochloric acid was being pumped from the Spent Pickle Liquor Holding Tank (SWMU CRM 3) to a tanker truck. It appears that a fitting on the hose broke and approximately 50 gallons leaked and went into a floor drain leading to the SRWWTP and ultimately to the Rouge River.

A total of 60 Solid Waste Management Units (SWMUs) and 5 Areas of Concern (AOCs) were identified during the PA and VSI. The SWMUs and AOCs are listed in Table 1 on the following page.

Table 1: Solid Waste Management Units and Areas of Concern

SWMU/AOC No.	SWMU/AOC NAME	RELEASE POTENTIAL	1987 PA/VSI REPORT SWMU No.
SWMU CP 1	North and South Quench Stations	High	N/A
SWMU CP 2	Coke Oven Gas Drip Water Tanks	Low	12
SWMU CP 3	Coke Oven Tar Sludge Decanter Box	High	N/A
SWMU CP 4	Coke Oven Tar Sludge Decanter Staging Area	Low	14
SWMU CP5	Coke Oven Light Oil Muck Tanks	Low	17
SWMU CP 6	300 Gallon Hazardous Waste Tank	Low	N/A
SWMU CP 7	Coke Oven Tar Sludge Tanks	Low	N/A
SWMU CP 8	Coke Oven Biological Wastewater Treatment Plant	Low	18
SWMU CP 9	Injection Well System	Low	16
SWMU CP 10	Coke Oven Gas Holder Waste Tanks	Low	10
SWMU CP 11	GG Building Coal Picking Refuse Pile	Low	11
SWMU CP 12	Coke Oven Refractory Refuse Pile	Low	13
SWMU CP 13	AC Still Bottom Holding Sludge Lagoon	Low	15
SWMU BF 1	Blast Furnace Wastewater Treatment Plant (BFWWTP)	Moderate	23
SWMU BF 2	Blast Furnace Slag Pit	Low	N/A
SWMU BF 3	Flue Dust Catcher	Moderate	N/A
SWMU BF 4	Waste Material Accumulation Pile	High	1
SWMU BOF 1	Lime Dust Hopper	Low	N/A

Table 1: Solid Waste Management Units and Areas of Concern

SWMU/AOC No.	SWMU/AOC NAME	RELEASE POTENTIAL	1987 PA/VSI REPORT SWMU No.
SWMU BOF 2	Ladle Dumping Operation Pits	Low	8
SWMU BOF 3	Desulfurization (D/S) Hoppers	Low	N/A
SWMU BOF 4	Course and Fine Dust Silo	Moderate	7
SWMU BOF 5	Kish Hoppers	Low	N/A
SWMU BOF 6	BOF Slag Pile	Low	N/A
SWMU BOF 7	BOF 55 Gallon Drum Pick Up Area	Low	N/A
SWMU BOF 8	BOF Slag Pit	Low	N/A
SWMU EAF 1	Former Tar Sludge Landfill	High	N/A
SWMU EAF 2	EAF Silo	High	9
SWMU EAF 3	EAF Shop Hopper	High	9
SWMU LRF 1	Vacuum Degasser Recycling System	Low	N/A
SWMU LRF 2	Ladle Refining Facility No. 1 and the Vacuum Degasser System Baghouse	Low	N/A
SWMU LRF 3	Ladle Refining Facility No. 2 Baghouse	Low	N/A
SWMU CCS 1	12A Lagoon	Moderate	N/A
SWMU CCS 2	Continuous Caster Recycle System	Moderate	N/A
SWMU CCS 3	Drums Storage Area	Low	N/A
SWMU FSM 1	Former Slab Mill Scale Pit	Moderate	N/A
SWMU FSM 2	Slab Mill Scale Piles	Moderate	N/A
SWMU FSM 3	Former Scarfer Grit Scale Pit	Moderate	N/A

Table 1: Solid Waste Management Units and Areas of Concern

SWMU/AOC No.	SWMU/AOC NAME	RELEASE POTENTIAL	1987 PA/VSI REPORT SWMU No.
SWMU FSM 4	Soak Pit Debris Pile	Low	N/A
SWMU HSM 1	North and South Hot Strip Mill Scale Pits	High	N/A
SWMU CRM 1	PCB-Contaminated Oil UST	High	N/A
SWMU CRM 2	North and South Neutralization Areas	Low	N/A
SWMU CRM 3	Spent Pickle Liquor Holding Tank	Low	24
SWMU CRM 4	Spent Pickle Liquor <90 Day Storage Tanks	Low	24
SWMU CRM 5	Tandem Mill Sump Oil Tank	Low	N/A
SWMU CRM 6	Roll Shop Silo and Dust Box	Low	N/A
SWMU CRM 7	J-9 Sludge Box	Low	N/A
SWMU CRM 8	Scrap Oil Drums	Low	N/A
SWMU CRM 9	Z-46 (Z-47) Waste Oil Tanks	Low	N/A
SWMU CRM 10	Cold Mill Sumps	Low	N/A
SWMU MIS 1	Asbestos Storage Area	Low	N/A
SWMU MIS 2	<90 Day Hazardous/Non-hazardous Waste Area	Low	25
SWMU MIS 3	Hi-Lo Waste Oil Tank	High	N/A
SWMU MIS 4	PCB Storage Building	Low	19
SWMU MIS 5	Sewer Lines	Low	N/A
SWMU MIS 6	Methylene Chloride Drums-Oxygen Plant	Low	N/A
SWMU MIS 7	Used Oil Dempsters	Low	21
SWMU MIS 8	Spent Mold Foundry Sand Pile	Low	22

Table 1: Solid Waste Management Units and Areas of Concern

SWMU/AOC No.	SWMU/AOC NAME	RELEASE POTENTIAL	1987 PA/VSI REPORT SWMU No.
SWMU MIS 9	Parts Cleaners	Low	N/A
SWMU MIS 10	New Debris Pile	Low	N/A
SWMU MIS 11	WOF Stockpiled Material	Moderate	N/A
AOC A	Oil Release Adjacent to J-9 Shop	High	N/A
AOC B	Oil Release North Side of Hi-Lo Shop	High	N/A
AOC C	Electric Arc Furnace	High	N/A
AOC D	Coke Plant and By Products Area	High	N/A
AOC E	Sluice Pits	Unknown	N/A
AOC F	BOF UST	High	N/A

III. SOLID WASTE MANAGEMENT UNITS

This section presents descriptions of the SWMUs identified during the PA and VSI at the Rouge Steel facility. Photograph numbers correspond to those presented in the photograph log in Appendix A.

SWMU CP 1 - North and South Quench Stations

Photograph No(s).: R1P9, R1P10, R6P8, R6P14, R6P15, R6P16, R6P17, R6P18 and R1P20

Period of Operation: Unknown to 1987; it is reported that Coke Batteries A, B, and C were constructed in the 1930s and Battery D was constructed in the 1950s. The operational history of the Quench Stations is not known; however, Reference 20 indicates the Quench Recirculating Systems may have been added in 1979.

Location: This unit is located at the north and south ends of the coke batteries in the Coke Plant Area.

Physical Description: These units are two brick towers used to quench rail cars of hot coke with water for cooling. These units consists of the following components: North Quench Station (SWMU CP 1a), South Quench Station (SWMU CP 1b), North Quench Recirculating Sump (SWMU CP 1c), and the South Quench Recirculating Sump (SWMU CP 1d). The North and South Quench Stations (SWMU CP 1a and 1b, respectively) are located at each end of the Coke Batteries. The rail car containing the hot coke entered the tower, which was equipped with a overhead sprayer to spray water on the hot coke. The floor of the unit appeared to be soil covered with gravel or slag. The water and condensed steam would drain to the adjacent associated sumps (North and South Quench Recirculating Sumps, SWMUs CP 1c and CP 1d) for recirculation as quench water. Steam was also released to the atmosphere.

The North Quench Recirculating Sump is located on the west side of the North Quench Station and the South Quench Recirculating Sump is located on the south and east corner of the South Quench Station. Each of these concrete sumps contained standing liquid at the time of the VSI, so their depth could not be determined. The estimated dimensions of the North Quench Recirculating Sump are 45 feet by 20 feet. The South Quench Recirculating Sump is roughly the same capacity as the North Quench Recirculating Sump, although it is "L" shaped. Facility representatives did not known the purpose or function of this shape.

According to file materials, coke oven drip gas condensate from the Coke Oven Gas Drip Water Tanks (SWMU CP 2) was conveyed to the Quench Stations and added to the quench water. According to the November 30, 1998 Rouge Steel response to U.S. EPA Region 5's Information Request, the Coke Oven Drip Gas was used in the North Coke Oven Recirculating Sump to quench the hot coke. However, Reference 20 indicates that perhaps both units received "coke oven gas scrubber water" for use.

At the time of the VSI, a Coke Oven Gas Drip Water Tank (SWMU CP 2) was observed to the southeast of the North Quench Tank. A smaller tank was located on the south side of the Coke Oven Gas Drip Tank. At the southwest corner of the smaller tank, a 55- gallon drum was located partially below grade. Facility representatives were not cognizant of the use of these tanks when the plant was operational but suggested that the smaller tank may have served as a vapor separator and the 55- gallon drum may have

SWMU CP 1 - North and South Quench Stations (Continued)

served as a condensate trap for the Coke Oven Gas prior to use in the North Coke Oven Recirculating Sump. Similar tanks and equipment were not observed at the South Quench Station at the time of the VSI.

Wastes Managed: The unit quenched hot coke using recirculated water and coke oven gas condensate (D003) that contained traces of cyanide and sulfide. This waste was designated D003 due to the potential; for release of toxic gases if mixed with highly acidic solutions. No analytical data were available on the chemical composition of the coke oven gas condensate, however, the facility stated in their November 30, 1998 response to U.S. EPA's Information Request that this waste was designated as hazardous at times based on its appearance and shipped offsite for disposal as a hazardous waste.

History of Releases: Reference 20 reports that out of tower quenching occurred during times of Quench Station shutdown. Effluent from this operation was reportedly collected in the facility surface drainage system and eventually discharged to the associated outfall.

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

Conclusions: Water containing hazardous constituents was used to quench the hot coke. Steam and condensate penetrated the soils underneath the rail cars and drained to the nearby sump. Therefore, the release potential is determined to be high. Furthermore, quenching was reported to occur outside of the station during maintenance of the system. The facility should attempt to determine the location of the quenching that occurred outside of the stations.

SWMU CP 2 - Coke Oven Gas Drip Water Tanks

Photograph No(s).: R1P6, R1P7, R1P8 and R1P23

Period of Operation: These units were in operation from 1973 until 1987.

Location: These units were located throughout the Coke Plant and By-Products Area (AOC D) and the steel making complex. The aboveground tanks were located at the XX Building, at the North Quench Station (SWMU CP 1a), Coal and Coke Lab, West Head House, northeast corner of the EE Building, and at the gas holder. The underground tanks were located in the JJ Building, Old Booster Station, Continuous Caster Plant, the Frame Plant East, and the Frame Plant West. At the time of the VSI, only four of the aboveground tanks were visible at the Coke Plant and By Products Area (AOC D). The four tanks that were visible were located at the North Quench Station (SWMU CP 1a), the XX Building, and the Coal and Coke Lab.

Physical Description: The aboveground tanks and three of the underground tanks are constructed of steel. The underground tanks located at the Old Booster Station and the Continuous Caster Plant were constructed of fiberglass. The aboveground tanks have the following capacities: 5-10,000 gallons, 1-5,000 gallons, 1-12,000 gallons. The underground tanks had the following capacities: 2-2,000 gallons, 2- 1,500 gallons, and 1-1,000 gallons. According to the facility representative, all of the underground storage tanks at the facility have been closed, and where possible, many of these tanks have been removed. According to the available file material, any spills that occurred at the aboveground tanks were contained in concrete dikes. The four tanks that were visible during the VSI were contained in concrete dikes, except the tank located at the Coal and Coke Lab. This tank had been removed from the dike so that it could be used elsewhere at the site, but upon discovering that the tank contained a hole, it was determined to be unusable.

These units managed coke oven gas drip water (D003) generated when moisture in the coke oven gas condensed. This moisture was subsequently collected in gas piping, captured at drip legs, and then accumulated in these tanks. The drip water was then pumped from these tanks and deposited in the sump adjacent to the North Quench Station (SWMU CP 1a). At the North Quench Station, the drip water was used to quench the hot coke from the coke ovens. Coke oven gas drip water (D003) that was not suitable for use as quench water was disposed of offsite. According to the PA/VSI report dated May 6, 1987, prior to 1973, this material was not collected. According to the available file material, this material was treated and disposed of in the Injection Well System (SWMU CP 9) from 1956 until 1981.

Wastes Managed: This unit managed coke oven drip water (D003), a clear, lightly colored liquid, that contained traces of cyanide and sulfide. This waste was designated D003 due to the potential for release of toxic gases if mixed with highly acidic solutions.

SWMU CP 2 - Coke Oven Drip Water Tanks (Continued)

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	( )
	Moderate	( )
	Low	(X)

Conclusions: No further action is warranted based on the materials of construction, secondary containment, and no prior evidence of release. The unit is no longer operable.

SWMU CP 3 -Coke Oven Tar Sludge Decanter Box

Photograph No(s).: R1P4, R1P11 and R6P10

Period of Operation: This unit was in operation from 1986 until 1987. The tar sludge decanter that deposits the waste into this unit operated from 1937 until 1986, when it was replaced with a new tar sludge decanter.

Location: This unit is located in the Coke Plant and By-Products Area (AOC D), in the southeastern portion of the facility, south of one of the Coke Oven Gas Drip Water Tanks (SWMU CP 2).

Physical Description: This unit is constructed of steel and measures approximately 5.5 feet tall, 5 feet wide, and 6 feet across. Any spills that occurred at this unit were contained by a concrete pad. At the time of the VSI, black tar-like material was observed on the ground in the vicinity of this unit.

This unit managed tar decanter sludge (K087) generated during the extraction of tar from the coke oven gas. During extraction, the coke oven gas was first cooled with an ammonia liquor prior to entering precipitators, where tar particles were attracted to the sides of the precipitator pipes. The tar then dropped to the bottom of the precipitators where it was pumped to tar decanters. In the tar decanter, the tar and ammonia liquor were separated by gravity. The tar was pumped to tar collection tanks, referred to as the Coke Oven Tar Sludge Tanks (SWMU CP 7), for storage, and the ammonia liquor was pumped to storage tanks. The tar decanter sludge that collected at the bottom of the decanter was then transferred to this unit before being charged back into the coke ovens along with coal. Prior to the construction of this unit, the tar decanter sludge (K087) was stored at the Coke Oven Tar Sludge Decanter Staging Area (SWMU CP 4) and then disposed of offsite in a landfill.

Wastes Managed: This unit managed tar decanter sludge (K087) from tar sludge decanters. This waste contained traces of cyanide and benzene.

History of Releases: During a RCRA inspection conducted on March 14, 1986, tar pitch spillage was observed in the vicinity of this unit. According to the inspection report, approximately five gallons of tar pitch was observed in front of this unit. Rouge Steel later explained that the tar pitch is a product, not tar decanter sludge (K087). According to Rouge, it was normal to dispose of any tar pitch spillage with the tar decanter sludge. As a response to the spillage, a new steel plate was welded onto this unit to prevent further spillage. At the time of the VSI, black tar-like material was observed on the ground.

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

SWMU CP 3 -Coke Oven Tar Sludge Decanter Box (Continued)

Conclusions: Since there have been releases at this unit and tar sludge was observed in the vicinity of this unit during the VSI, this unit has a high potential for release to the environment. It is recommended that confirmatory sampling be conducted in the vicinity of this unit along with the RFI for the Coke Plant and By-Products Area (AOC D).

SWMU CP 4- Coke Oven Tar Sludge Decanter Staging Area

Photograph No(s).: R6P11

Period of Operation: This unit was in operation from the 1920s to March 14, 1986.

Location: This unit is located in the southeastern portion of the facility, east of the Coke Plant and By-Products Area (AOC D).

Physical Description: This unit was constructed of concrete and measured approximately 30 feet long and 30 feet wide with coke breeze walls approximately 3 feet high. This unit was situated over the foundation of two by-product coke batteries that were constructed around 1920 and demolished in the mid-1930s. The foundation of the by-product coke batteries measure approximately 827 feet long and 70 feet wide. At the time of the VSI, the integrity of this area could not be observed because it was overlain by iron ore fines from the WOF Stockpiled Material (SWMU MIS 11).

This unit has been used for a variety of things, but primarily, it was used for storing coal and coke breeze. This unit also managed tar decanter sludge (K087) generated from the extraction of tar from the coke oven gas. The tar decanter sludge from the tar decanters was transferred to this unit where it was mixed with coke breeze prior to being transported offsite for disposal in a landfill. This practice continued until 1986, when the Coke Oven Tar Sludge Decanter Box (SWMU CP 3) began operating.

During an inspection on March 14, 1986 this unit was identified as a surface impoundment. This unit was described as an area of "liquids within black particulates." It was further observed that this area was located adjacent to a coal pile, and it could not be determined where the coal stopped and this unit began. According to the facility, the area was completely covered by a concrete pad, and therefore, the material stored there posed no threat to the environment. Following this inspection, a closure plan was submitted to MDNR. As part of this closure plan, 200 yds ^{3} of tar decanter sludge (K087), coke breeze, and soil was removed from this unit and disposed of offsite in a landfill. Also, eight core samples were taken at this unit that revealed that all parameters tested were below detection limits. On March 16, 1988, MDNR certified that the area had been clean closed.

Wastes Managed: This unit managed coke breeze and tar decanter sludge (K087) from tar sludge decanters that contained traces of cyanide and benzene.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: No further action is warranted based on the secondary containment feature, sampling results, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 5- Coke Oven Light Oil Muck Tanks

Photograph No(s).: R1P14

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have been in operation from 1937, when the coke ovens were rebuilt, until 1987.

Location: These units are located at the Coke Plant and By-Products Area (AOC D) in the southeastern portion of the facility, east of the Light Oil Building.

Physical Description: These units are constructed of steel and have capacities of 10,000 gallons each. Any spills that occurred at these units were contained in a concrete dike that is approximately 2 feet tall. At the time of the VSI, there were no signs of cracks or staining in the vicinity of these units. During the VSI, these tanks were believed to be located in the same containment as three other process tanks. These units could not be distinguished from the process tanks at the time of the VSI.

These units managed light oil muck (D003) generated from decanting the wash oil used to wash the coke oven gas. The coke oven gas was washed with oil to precipitate light oil. Both the wash oil and the light oil were then pumped to a light oil still where they were separated. The light oil was subsequently condensed, decanted, and pumped into storage tanks. The wash oil was decanted and then cooled and recirculated to the scrubbers. The light oil muck generated from decanting the wash oil was transferred to this unit for stabilization before being disposed of in a landfill.

Wastes Managed: This unit managed light oil muck (D003), a brownish-black, "oily" liquid with a coal-tar type odor, that contained traces of cyanide and benzene.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: No further action is warranted based on materials of construction and secondary containment structure, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 6 - 300 Gallon Hazardous Waste Tank

Photograph No(s).: R2P1

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have been in operation from 1937, when the coke ovens were rebuilt, until 1987.

Location: This unit is located in the Coke Plant and By-Products Area (AOC D), in the southeastern portion of the facility, adjacent to the north spiral coolers.

Physical Description: This unit is constructed of steel and has a capacity of 300 gallons. This unit is situated over a pad constructed of cinder block and concrete, and any spills were contained by sumps located around and under the unit. The integrity of the pad could not be inspected due to the presence of mud.

This unit received flushings from the cleaning of the north spiral coolers. During the VSI, the facility representative referred to these coolers as the serpentine coolers. The serpentine coolers were used to cool pressure streams generated at the Coke Plant and By-Products Area (AOC D). The unit was reportedly drained after the cleaning process, and the flushings were then disposed of with the tar sludge.

Wastes Managed: This unit received flushings from cleaning the serpentine coolers, which occurred two to three times a year.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the material of construction and secondary containment structures, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 7- Coke Oven Tar Sludge Tanks

Photograph No(s).: R1P20

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have been in operation from 1937, when the coke ovens were rebuilt, until 1987.

Location: These units are located at the Coke Plant and By-Products Area (AOC D) in the southeastern portion of the facility, inside the Tar Tank Farm south of the Light Oil Plant.

Physical Description: These units include three tanks. Two tanks are constructed of steel, and two of the tanks have capacities of 15,000 gallons. One tank has an estimated capacity of 30,000 gallons. Any spills that occurred at these units were contained by a concrete dike.

These units managed tar collected from the tar sludge decanter. Once the tar was accumulated, it was pumped from these units to barges. Any residual tar sludge (K087) that remained in these units was disposed of in an offsite landfill. These units were cleaned once every three to six years, and the material generated was a pasty mixture of tar and coke breeze.

Wastes Managed: These units stored tar sludge (K087) that contained phenol and naphthalene. The reason the tar sludge contained naphthalene is because the naphthalene that was removed from the coke oven gas was mixed with the tar and allowed to solidify.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the material of construction and secondary containment structure, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 8- Coke Oven Biological Wastewater Treatment Plant

Photograph No(s).: R1P15, R1P16, R1P17, R6P12 and R6P13

Period of Operation: This unit was in operation from July 1985 until 1987.

Location: This unit is located at the Coke Plant and By-Products Area (AOC D) in the southeastern portion of the facility, southeast of the Coke Oven Light Oil Muck Tanks (SWMU CP 5).

Physical Description: This unit is a wastewater treatment system. The components of this system include a Pump Transfer Station (SWMU CP 8a), Wet Surface Air Cooler (SWMU CP 8b), Aeration/Equalization Basin (SWMU CP 8c), Skimmed Oil Holding Tank (SWMU CP 8d), and Rotating Biological Contactors (SWMU CP 8e). Wastes entering the system were pumped to the intercepting sump, or Pump Transfer Station (SWMU CP 8a). The wastewater was then cooled in a Wet Surface Air Cooler (SWMU CP 8b) before being piped to a 70,000 gallon concrete Aeration/Equalization Basin (SWMU CP 8c) equipped with a floating aerator. In this basin, the wastewater was mixed and equalized. From the aeration/equalization basin, the wastewater was piped to a 1,000 gallon concrete Skimmed Oil Holding Tank (SWMU CP 8d) where oil was skimmed off and the pH adjusted. The skimmed oil was transported offsite for disposal, and the wastewater was piped to the rotating biological contactors. The Rotating Biological Contactors (SWMU CP 8e) are constructed of plastic and housed in steel cases situated over concrete. In these contactors, the wastewater was rotated to extract the solids before being piped through Sewer Lines (SWMU MIS 5) to the sanitary sewer system.

Wastes Managed: This unit treated several waste streams. Among these were AC still bottoms generated from adding sodium hydroxide and steam to the ammonia liquor still to extract ammonia gas from ammonia liquor. The ammonia gas was later used in the coke ovens. In the mid-1950s the AC still bottoms were stored at the AC Still Bottoms Holding Sludge Lagoon (SWMU CP 13) until they were removed offsite for disposal.

This unit also treated diammonium phosphate effluent generated from extracting ammonia from coke gas. In this process, the coke oven gas was sprayed with phosphoric acid, and the ammonia combined with the phosphate in the acid to create an ammonia phosphate slurry. The slurry was then crystallized and dried resulting in a diammonium phosphate effluent.

Wastewater from the light oil plant was also treated in this unit. The wastewater was generated from decanting the wash oil used to wash the coke gas, and the light oil that precipitated out of the coke oven gas. The AC Still Bottoms contained traces of phenol, ammonia, cyanide, and sulphides, and the light oil wastewater contained traces of phenol, cyanide, and ammonia. A hazardous waste code was not given for any of these wastes in the file material.

SWMU CP 8- Coke Oven Biological Wastewater Treatment Plant (Continued)

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	( )
	Moderate	( )
	Low	(X)

Conclusions: No further action is warranted based on the materials of construction, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 9 - Former Injection Well System

Photograph No(s).: R1P12 and R1P13

Period of Operation: Well No. 1 was in operation from 1956 until 1984, and well No. 2 was in operation from 1976 until 1987.

Location: This unit is located in the Coke Plant and By-Products Area (AOC D) in the southeastern portion of the facility, at the WW Pump House. Well No. 1 and No. 2 are actually located east of the Coal Road.

Physical Description: This unit treated final cooler water (D003) from the Coke Plant and By-Products Area (AOC D). In the final gas coolers, partially cooled coke oven gas was sprayed with water and naphthalene and moisture was condensed out. The naphthalene was then distilled from the cooler water naphthalene mixture, and the resulting cooler water was then piped to a final cooler sump. Piping from the final cooler sump to the injection pump is constructed of Schedule 40 steel piping and the piping from the injection pump to the well head is constructed of Schedule 80 steel piping.

When the cooler water rose to a pre-determined level in the final cooler sump, a sensor transmitted a signal to a Bristol controller which opened the Bristol Diaphragm Valve. The valve remained open until the water level dropped to the desired operating level. From the Bristol Diaphragm Valve, the cooler water was piped through a set of filters. These filters contained mesh in descending sizes that ranged from 100 microns to 1 micron. The cooler water was first piped to a set of Sparkler filters. These filters were model SCJ-24-17 filters that were enclosed in cylindrical, horizontally mounted steel containers. The mesh on these filters were 100 microns.

From the Sparkler filters, the cooler water was then piped to a set of 3 GAF cartridge type filters. These filters were enclosed in cylindrical, vertically mounted steel containers. The mesh sizes of these filters were successively smaller. These filters consisted of a 4 pac unit at 50 microns, a 2 pac unit at 5 microns, and a one pac unit at one micron.

The cooler water was piped from the cartridge filters to an 800 gallon Surge Tank. The purpose of this tank was to maintain an adequate supply of water for the Gardner-Denver steam positive displacement injection pump. The Surge Tank was vented inside of the WW Pump House to equalize tank pressure as the water level rose and fell. From 1956 until 1976, the cooler water was pumped from the Surge Tank to Well No. 1 for deep disposal into the Sylvania Formation. However, from 1976 until 1984, Well No. 1 was only used as a stand by well. From 1976 until 1987, the cooler water was pumped to Well No. 2 for disposal into the Mt. Simon Formation, which is 4308 feet below the ground surface. According to the UIC permit issued on April 22, 1986, Well No. 2 is constructed of four concentric "strings" of carbon steel casing cemented to the surface plus injection tubing. The four concentric "strings" of steel casing consists of conductor, surface, intermediate, and long string casing. All of the casing is constructed of carbon steel. The conductor casing is set to a depth of 10 feet, the surface casing is set to a depth of 137 feet, the intermediate casing is set to a depth of 664 feet, and the long string casing is set to

SWMU CP 9 - Injection Well System (Continued)

a depth of 4307 feet. The conductor casing has an outer diameter of 20 inches, the surface casing has an outer diameter of 13 3/8 inches, the intermediate casing has an outer diameter of 9 5/8 inches, and the long string casing outer diameter of 5 ½ inches. The injection tubing is set to a depth of 3864 feet with an outer diameter of 2 3/8 inches. The construction details of Well No. 1 could not be found in the available file material or obtained during the VSI.

All of the elements, except the deep disposal wells, of this unit are housed in the WW Pump House. Any leaks that occurred at this unit were contained by a concrete-lined trench that connected the WW Building to the tar pitch pit at the flush liquor decanters. All the leaked or vented material from this unit was returned to the coking process at the flush liquor system.

Wastes Managed: This unit treated and disposed of coke oven gas final cooler wastewater (D003). According to the available file material, the coke oven drip water (D003) was also treated and disposed of in this unit. From the available file material, it appears that the coke oven gas drip water was treated in this unit from 1956 until 1984. This unit injected these wastes at a rate of up to 35,000 gallons per day. Only 25,000 gallons per day of coke oven gas final cooler wastewater (D003) were injected.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 10- Coke Oven Gas Holder Waste Tanks

Photograph No(s).: R1P21

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have been in operation from 1937, when the coke ovens were rebuilt, until 1987.

Location: These units are located in the Coke Plant and By Products Area (AOC D) in the southeastern portion of the facility, adjacent to the coke oven gas holder tank.

Physical Description: These two tanks are constructed of steel and have capacities of 1,000 gallons each. Any spills that occurred at these units were contained by a concrete dike. At the time of the VSI, these units were rusted.

According to the May 6, 1987 PA/VSI report, these units managed oil de-emulsifier and contaminated waste oil. When the oil used in the sealant ring of the piston inside the coke oven gas holder tank became contaminated, a de-emulsifier was added in one of these tanks to remove water. The clean oil was subsequently recycled back into the piston sealant system, and the oily water was piped to the other tank where it was stored prior to removal by an offsite vendor.

Wastes Managed: These units managed oil, de-emulsifier, and contaminated waste oil from the piston sealant system of the coke oven gas holder.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment structure, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 11 - GG Building Coal Picking Refuse Pile

Photograph No(s).: R1P24 and R6P19

Period of Operation: This unit operated from approximately 1954 until 1987.

Location: This unit was located at the Coke Plant and By Products Area (AOC D) in the southeastern portion of the facility, at the GG Building.

Physical Description: According to the May 6, 1987 PA/VSI report, this unit was a hopper of unknown dimensions that was used to accumulate mine refuse. This material accumulated as a result of hand picking refuse from the coals after breaking the coal prior to crushing. The coal was broken in a perforated drum called a breaker. From the breaker, the breakable coal exited through openings and was conveyed to the mixing building. The larger, less breakable coal, iron, and other foreign materials that could not pass through the perforated plates of the breaker exited onto a picking belt. On the picking belt, the foreign material was separated from the large coal, which was fed into the crusher before going to the mixing building. The foreign materials consisted of wood, slate, shale, rock, etc. This material was stored in this unit prior to offsite disposal.

Wastes Managed: This unit managed mine refuse that included wood, slate, shale, rock, etc.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the secondary containment structure, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 12 - Coke Oven Refractory Refuse Pile

Photograph No(s).: R1P19

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have been in operation from 1937, when the coke ovens were rebuilt, until 1987.

Location: This unit was located at the SS Maintenance Building, in the southeastern portion of the facility, south of the Coke Plant and By-Products Area (AOC D).

Physical Description: According to the May 6, 1987 PA/VSI report, this unit was a waste pile with a maximum capacity of 10 yd^3. The waste pile was situated on concrete.

This unit was used to store the refractory lining from the coke oven doors. The refractory lining from the coke oven doors was removed and scraped off at this unit and allowed to accumulate until offsite disposal.

Wastes Managed: This unit stored coke oven refractory lining that contained silica with ceramic binders. According to the PA/VSI report, the refractory lining is not a hazardous waste, and any hazardous constituents present were not present in meaningful levels. The waste was removed from this unit on a monthly basis.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment structure, no release history or evidence of release, and the unit is no longer operable.

SWMU CP 13- AC Still Bottom Holding Sludge Lagoon

Photograph No(s).: R1P12

Period of Operation: This unit was in operation in the mid-1950s. According to the May 6, 1987 PA/VSI report, this unit was in operation for less than a year.

Location: This unit was located in the Coke Plant and By-Products Area (AOC D) in the southeastern portion of the facility. Although the exact location of the unit is unknown, a document dated May 17, 1988 in the information response shows that the unit might have been located adjacent to the XX Building.

Physical Description: This unit was brick lined with a capacity of 50,000 gallons. This unit measured approximately 100 feet long and 20 feet wide.

This unit stored AC still bottoms generated during the extraction of ammonia gas from ammonia liquor. The AC still bottoms were stored at this unit until they were removed offsite for disposal. Before this unit began operating, the still bottoms were being discharged to the Power House sewer. During the operation of this unit, discharge of the AC still bottoms was relocated from the Power House sewer to Detroit's sanitary sewer system. This unit was closed and backfilled when the sewer relocation was complete. The AC still bottoms were discharged to Detroit's sanitary sewer system until the Coke Oven Biological Wastewater Treatment Plant (SWMU CP 8) began operating.

Wastes Managed: This unit stored AC still bottoms until they were removed offsite for disposal. This waste stream was not considered hazardous, but there is a possibility that it contained hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the secondary containment, no release history, no evidence of release, and the unit is no longer operable.

SWMU BF 1 - Blast Furnace Wastewater Treatment Plant (BFWWTP)

Photograph No(s).: R2P2, R2P3, R2P16, R2P17, R2P18, R2P19, R2P20, R2P21, R2P22, R2P24, R2P25 and R6P2

Period of Operation: The wastewater treatment plant (BF 1a-1n) was placed into operation in 1980 or 1981 and is currently active. The period of operation for the Concrete Pit (BF 1m) is unknown.

Location: This unit is located north of the blast furnaces (BFs) and southeast of the boat slip.

Physical Description: The BFWWTP comprises the multiple components and associated piping which receive and treat blowdown water from the blast furnace cooling water. The function of the BFWWTP is to cool and separate solids from the blowdown prior to recirculation of the cooling water in the blast furnace. The components of the BFWWTP include:

BF 1a -	BF B and C Thickeners
BF 1b -	BF B and C Collection Boxes
BF 1c -	Raw Waste Sump
BF 1d -	Splitter Box
BF 1e -	North Clarifier
BF 1f -	South Clarifier
BF 1g -	Cooling Tower Sump Wet Well
BF 1h -	Cooling Towers
BF 1i -	Deep Bed Filters
BF 1j -	Thickener
BF 1k -	Vacuum Filter
BF 1l -	BF Filter Cake Garage
BF 1m -	Concrete Pit
BF 1n -	Surge tank

According to file materials, the blast furnace wastewater is collected at the BFs in the BF B and C Thickeners (SWMU BF 1a). According to Reference 47, the BF B and C Thickeners are 70,000 gallon rubber lined tanks, which are approximately 45 feet tall with a conical bottom. The sludge collected is piped to the Thickener (BF 1j) and the water is conveyed to the B and C Collection Boxes (SWMU BF 1b).

According to the BFWWTP Operator, the BF Blowdown is next received at the Raw Waste Sump (SWMU BF 1c) which is equipped with a Bar Screen to remove large solids. The wastewater is then pumped to the Splitter Box (BF 1d) where coagulant is added to facilitate solids settling and sodium hydroxide is added to control pH. The Splitter Box is a steel, open-topped, and rectangular tank which receives approximately 5200 gallons per minute of blowdown water. From the Splitter Box, the wastewater is split and conveyed to the North and South Clarifiers (SWMUs BF 1e and BF 1f,

respectively) for solids settling. These clarifiers are steel-walled tanks that rest directly on a concrete pad with no secondary containment. The tanks are open-topped and according to the BFWWTP operator, the floors of the clarifiers are inspected about once every six months.

The overflow from the clarifiers is conveyed to the Cooling Tower Sump Wet Well (SWMU BF 1g), then to the Cooling Towers (SWMU BF 1h). After cooling the wastewater is either recirculated to the Blast Furnace for reuse or conveyed for further treatment at the Deep Bed Filters (SWMU BF 1i). The Deep Bed Filters, housed inside the BFWWTP Building, consist of dual media (anthracite and sand) pressure filters. This step also includes treatment with sodium bisulfite to destroy the ammonia and phenols in the waste stream. From the Deep Bed Filters, the water is discharged to the Rouge River through Outfall 004B. According to facility representatives, the Deep Bed Filters are periodically back flushed to regenerate the filters. The generated liquids are conveyed to the Splitter Box (SWMU BF 1d) by way of the Surge Tank (SWMU BF 1n). The spent filter medium is taken to an offsite landfill.

The underflow from the North and South Clarifiers (SWMUs BF 1e and BF 1f) is conveyed to the Thickener (SWMU BF 1j). The Thickener is an open-topped steel tank, resting directly on a concrete pad with no secondary containment. The overflow from the Thickener is returned to the North Clarifier (SWMU BF 1c). The underflow is pumped to the Vacuum Filter (SWMU BF 1k), located inside the BFWWTP Building above the BF Filter Cake Garage (SWMU BF 1l). The filtrate from the Vacuum Filter is returned to the Thickener (SWMU BF 1j). The Vacuum Filter is a leaf sector filter, which drops the collected filter cake through the floor to the BF Filter Cake Garage (SWMU BF 1l) below. The BF Filter Cake Garage is also referred to within some of the Rouge references as the Filter Cake Box. The concrete floor of the garage is estimated to be 15 feet wide and 20 feet deep. A drain is located in the front of the garage floor. According to the plant operator, about 150 tons of Blast Furnace filter cake are removed daily from the BF Filter Cake Garage by front end loader for staging at the Waste Material Accumulation Pile (SWMU BF 4).

A Concrete Pit (SWMU BF 1m), approximately 10 feet by 10 feet and 4 feet deep was located adjacent to the drive outside of the BF Filter Cake Garage on the south side of the BFWWTP building. Facility representatives were unsure of its purpose or former use. The BFWWTP operator stated that the unit pre-dated the BFWWTP and had not been used in the time he was associated with the plant. At the time of the VSI, it contained materials which appeared to be BFWWTP filter cake and miscellaneous trash.

At the time of the VSI, the BF B and C Thickeners, BF B and C Collection Boxes, Raw Waste Sump and Cooling Tower Wet Wells were not directly observed.

Wastes Managed: The unit treats BF Blowdown water which contains solids as well as lead, zinc, ammonia, cyanide, and phenol. As a result of treatment through the system, the quantities of ammonia, cyanide and phenol are reduced by means of alkaline chlorination, and solids are removed by vacuum filtration.

SWMU BF 1 - Blast Furnace Wastewater Treatment Plant (BFWWTP) (Continued)

History of Releases: According to the file materials, there is a history of repeated discharges to the rive from this unit. A Notice of Non-compliance was issued in the mid-1980s for repeated, unauthorized bypasses of the BFWWTP. Additionally, a 65,000 gallon release of untreated wastewater occurred on September 19, 1989. The wastewater was intentionally discharged through a storm sewer, by-passing the rest of the BFWWTP, due to a malfunction in the BF C Thickener at the Blast Furnace (SWMU BF 1a) . The wastewater was reported to contain lead, zinc, ammonia, cyanide, and phenol with the levels of phenols and solids in exceedance of allowable limits.

Another unpermitted release occurred on August 4, 1991 when a pump malfunctioned causing the Raw Waste Sump (BF 1c) to overflow. An estimated 2,212,500 gallons of wastewater flowed into the sewer and discharged into the boat slip through outfall 04E0.

At the time of the VSI, black sludge was observed on the outer, southeastern sidewall of the Thickener (SWMU BF 1j) and on the ground in the vicinity of the Thickener. Also, a great deal of black sludge, apparently black BF Filter Cake, was observed in the concrete drive immediately adjacent to the BF Filter Cake Garage (BF 1l). In some areas the material was observed to be several inches thick and the drive was cracked in places. Additionally, it appeared likely that runoff during heavy rainfall could reach the boat slip.

Potential for Past/present Release:

High	**( )**
Moderate	**(X)**
Low	**( )**

Conclusions: Based on VSI observations, filter cake and sludge are routinely released in the vicinity of this unit. Low levels of hazardous constituents are reported to be present, with release pathways observed to the river and underlying soils. Therefore, the potential for release is determined to be moderate.

SWMU BF 2 - Blast Furnace Slag Pit

Photograph No(s).: R3P4 and R3P5

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1920, when the Blast Furnaces began operation, until the present.

Location: This unit is located at the south end of the Blast Furnace raw material storage area in the eastern portion of the facility. This unit is located east of the Coke Plant and By Products Area (AOC D).

Physical Description: This unit is an earthen lined pit that measures approximately 50 feet long, 100 feet wide, and varying depths.

This unit is used to store slag generated in the Blast Furnaces from melting iron ore and limestone. In the Blast Furnaces, iron ore, limestone, and coke are placed at the top of the furnace. The molten iron that results flows from the bottom of the furnaces through concrete trenches and then into a ladle. The molten slag that floats on top of the molten iron is skimmed off. The molten slag then flows through a slag runner into a slag pot. Immediately, the molten slag is poured into this unit and cooled with water. A subcontractor uses the slag from this unit to form an aggregate which is then sold back to Rouge Steel.

Wastes Managed: This unit stores non-hazardous molten slag from the Blast Furnaces.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on no release history or evidence of release.

SWMU BF 3- Flue Dust Catcher

Photograph No(s).: R3P2

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1920, when the Blast Furnaces began operation, until the present.

Location: This unit is located at the Blast Furnaces in the eastern portion of the facility, south of the Spent Mold Foundry Sand Pile (SWMU MIS 8).

Physical Description: This unit is was not present at the time of the VSI, but it normally sits under a refractory brick lined opening. The dimensions of this unit could not be determined at the time of the VSI. This unit captures the blast furnace flue gas dust generated from cleaning. The blast furnace gas is generated as a result of the combustion of the iron ore, limestone, and coke. This unit captures the dust from the flue gas before it is cleaned in the gas scrubbers so that it can be burned in stones to preheat the incoming air to the Blast Furnaces. The captured blast furnace flue gas dust then drops into a hopper. At the time of the VSI, the hopper that collects the dust was not present, and the material of construction and measurements could not be determined. This unit is situated over concrete.
From the hopper, this material is taken to the WOF Stockpiled Material (SWMU MIS 11), where it will be stored for use in the Waste Oxides Facility. Prior to WOF stockpiling, this material was sold offsite.

Wastes Managed: This unit captures blast flue gas dust. This material was not found to be hazardous during the VSI or from the available file material.

History of Releases: At the time of the VSI, residue was observed underneath where this unit is normally located. It could not be determined if this unit is normally situated over concrete. he nature of these residues were not described during the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**(X)**
	Low	**( )**

Conclusions: No further action is warranted based on the material of construction and secondary containment. However, the release potential is moderate due to the materials that was observed underneath this unit during the VSI.

SWMU BF 4 - Waste Material Accumulation Pile

Photograph No(s).: R2P4, R2P5, R2P23 and R6P2

Period of Operation: The unit has been in operation at least since 1980 -1981 when the BFWWTP (SWMU BF 1) went on line. It is unknown if it was operational prior to that time. It is currently active.

Location: This unit is located immediately south of the BFWWTP (SWMU BF 1), near the northeast boat dock.

Physical Description: This unit is a waste accumulation pile for non-hazardous wastes generated at the Rouge Plant. The unit measures approximately 100 feet long and 100 feet wide and is located adjacent to a concrete containment wall on the north and east sides, although no distinct boundary was observed on the south end. It is reportedly underlain by concrete; however, the integrity and completeness of the concrete could not be confirmed at the time of the VSI due to the storage of BF filter cake. The overall slope of the waste pile drained to the west, with no effective containment. Immediately west of the unit is a road, with the boat slip immediately adjacent to the road. Additionally, BF Filter Cake was observed throughout the drive between and around the BFWWTP Filter Cake Garage (SWMU BF 11) and the waste pile at the time of the VSI.

According to the facility representative, loads of BF Filter Cake are brought by front end loader from the BFWWTP Filter Cake Garage (SWMU BF 11) on a daily basis and removed by truck to an offsite Class III landfill for disposal.

Previously, the unit was used also for the accumulation of kish (dust from the Baghouse at the Hot Metal Reladling Station in the BOF) and desulferizer dust from the BOF desulferizer. These materials were also brought to the site daily and covered with the BF Filter Cake using a front end loader. All materials were removed by truck to an offsite landfill twice per week. These materials are now stored at the New Debris Pile (SWMU MIS 10).

Wastes Managed: The unit currently stores BFWWTP Filter Cake which is reported to contain ammonia, cyanide, phenols, zinc and lead. It's moisture content is estimated at 15%. Historically, the unit also managed kish and delsulfer dust. According to the May 6, 1987 PA/VSI report, these materials contain hazardous constituents, but are not hazardous wastes. Analysis of the waste materials was requested from the facility but not provided by the time of this report.

History of Releases: There are no documented releases from this unit. However, at the time of the VSI, runoff from the unit containing black BF Filter cake, was observed at the road located immediately west of the unit. There is no effective containment to deter release to the boat slip west of the road. This condition was also observed in the May 6, 1987 PA/VSI report.

SWMU BF 4 - Waste Material Accumulation Pile (Continued)

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

Conclusions: Runoff containing black BF Filter Cake was observed on the road immediately west of the unit. This condition was also noted in the May 6, 1987 PA/VSI report. Additionally, runoff from the BFWWTP drive may also reach the Boat Slip (see SWMU BF 1) during periods of heavy rainfall. Therefore, the potential for release is high based on the likelihood of release to soil and surface water. It is recommended that the soil surrounding this unit be sampled.

SWMU BOF 1 - Lime Dust Hopper

Photograph No(s).: R2P15

Period of Operation: This unit has been in operation from 1964 until the present.

Location: This unit is located in the eastern portion of the facility on the east side of the Basic Oxygen Furnace Building, just south of the Kish Hoppers (SWMU BOF 5).

Physical Description: This unit is constructed of steel and measures approximately 5 feet tall, 5 feet wide, 3 feet long. This unit is situated under the Lime Dust Baghouse over concrete. At the time of the VSI, no cracks were observed in the concrete pad beneath the unit.

This unit is used to collect the lime dust generated when lime is dumped into a hopper for use in the Basic Oxygen Furnaces as an alloy. The dust is collected in a baghouse and dispensed into this unit from which it is sold to customers for reuse. In the past, the lime dust was disposed offsite.

Wastes Managed: This unit manages lime dust. The file material and information gathered during the VSI did not indicate that the lime dust is hazardous.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on materials of construction and secondary containment, and no release history or evidence of release.

SWMU BOF 2 - Ladle Dumping Operation Pits

Photograph No(s).: R4P20

Period of Operation: This unit has been in operation from 1964 to the present. However, the facility representative reported that this unit is not used very often.

Location: This unit is located in the western portion of the facility on the northern side of the Blast Oxygen Furnace Building.

Physical Description: According to the May 6, 1987 PA/VSI report, this unit consists of two concrete pits and a conveyance sluice. This unit manages material generated when the ladle cars that transport molten iron from the Blast Furnaces to the Basic Oxygen Furnaces are cleaned. First, the ladle cars are brought to the concrete pit located inside the ladle dumping building. This pit is covered with steel panel and equipped with high pressure water sprays. The ladle cars are cleaned at the steel paneled pit by turning them upside down. The water from the high pressure water spray then carries the material down the steel conveyance sluice to the outside concrete pit. This pit has a concrete bottom with sheet piling sidewalls. This unit measures approximately 200 feet long and 24 feet wide. The material settles to the bottom of the outside pit and water is recirculated to the steel paneled pit. The material is dug from the bottom of the outside pit bi-weekly using a crane and clamshell bucket. The material is then piled adjacent to the outside pit and allowed to drain. After one to four days, the material is loaded into trucks and removed to an offsite storage pile.

Wastes Managed: This unit managed non-hazardous material that consists of molten iron and slag. Any hazardous constituents that might be present in this material are not present at significant levels.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on materials of construction, no release history or evidence of release, and the infrequent operation of the unit.

SWMU BOF 3 - Desulfurization (D/S) Hoppers

Photograph No(s).: R4P21 and R4P22

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have began operation in 1964, when the Basic Oxygen Furnaces began operation, until the present.

Location: These units are located in the western portion of the facility at the eastern end of the Basic Oxygen Furnace Building, southeast of the Ladle Dumping Operation Pits (SWMU BOF 2).

Physical Description: This unit is constructed of steel and measures approximately 4 feet long, 3.5 feet wide, and 3 feet tall. This unit is situated under the steel desulfurization baghouse over concrete.

This unit manages the dust generated from the desulfurization process at the Blast Oxygen Furnace Building. The desulfurization process is the first step to converting the molten iron from the Blast Furnaces into steel in the Basic Oxygen Furnaces. First, the molten iron is poured into an iron ladle and transported to the desulfurization station where lime and powdered magnesium metal are added. This process generates desulfurization dust that is captured by a baghouse and then collected in this unit. Next, the material is transported to the New Debris Pile (SWMU MIS 10) prior to offsite disposal in a landfill. Prior to 1998, the desulfurization dust was transported to the Waste Material Accumulation Pile (SWMU BF 4) prior to offsite disposal

Wastes Managed: This unit manages non-hazardous desulfurization dust that might contain hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment structure, no release history, or evidence of release.

SWMU BOF 4 - Course and Fine Dust Silo

Photograph No(s).: R4P23

Period of Operation: This unit has been in operation from 1964 until the present.

Location: This unit is located in the eastern portion of the facility on the west side of the Basic Oxygen Furnace Building.

Physical Description: This unit is cylindrical shaped and is constructed of steel. The capacity of this unit could not be determined at the time of the VSI or from the available file material. This unit is elevated approximately 10 feet above the ground.

This unit is used to store course and fine dust particles present in the gases generated during the conversion of molten iron into steel in the Basic Oxygen Furnaces. According to the May 6, 1987 PA/VSI, the gases and dust from the Basic Oxygen Furnaces first pass through an electrostatic precipitator (ESP). A dropout chamber located between the furnaces and the ESP collects the larger and heavier dust particles known as course dust. From the drop out chamber, the course dust is transported on a screw conveyor to this unit. The fine dust is collected at the ESP and subsequently transported on screw conveyors to a muller where it is sprayed with steam. The wet fine dust is then emptied onto a belt conveyor and moved to this unit. The course and fine dust are discharged from this unit directly into a truck. The truck transports the dust directly to a type 3 landfill. When the Waste Oxides Facility is brought online, this material will be used to make briquettes for use in the Basic Oxygen Furnaces.

Wastes Managed: This unit manages non-hazardous fine and course dust particles that might contain some hazardous constituents which were not identified in the available file material or during the VSI.

History of Releases: At the time of the VSI, a large quantity of dust was present under this unit. The nature of the dust was not characterized during the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**(X)**
	Low	**( )**

Conclusions: Based on the lack of secondary containment and the release observed during the VSI, it is recommended that the facility examine any unpaved areas in the vicinity of this unit to determine if a release has occurred.

SWMU BOF 5 - Kish Hoppers

Photograph No(s).: R4P24

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1964, when the Basic Oxygen Furnaces began operation, until the present.

Location: This unit is located in the eastern portion of the facility on the west side of the Basic Oxygen Furnace Building, just east of the Desulfurization (D/S) Hoppers (SWMU BOF 3).

Physical Description: This unit was not visible during the VSI due to construction. However, based on the construction of similar units, it is known that this unit is constructed of steel. This unit is situated under the steel, kish baghouse over concrete. At the time of the VSI, the baghouse for this unit was being replaced with a radiator that would suction the gases from the kish. In the past, this unit was not situated over concrete.

This unit manages kish and iron oxides generated during reladling at the Basic Oxygen Furnaces. Molten iron is transported from the Blast Furnaces in ladle cars to the Basic Oxygen Furnaces. At the Basic Oxygen Furnaces, the molten iron is poured from the ladle cars to the iron ladle for transport to the desulfurization station. As the molten iron is being poured, gases are generated that contain iron oxide and flacked graphite particles (kish). In the past, the baghouse captured the kish and iron oxide and deposited them in this unit. Presently, a radiator is being used to capture the gases and circulate them back into the Basic Oxygen Furnace Building. Prior to 1998, the kish and iron oxide were collected in this unit and transported to a type two landfill. Currently, the material from this unit is transported to the New Debris Pile (SWMU MIS 10) prior to offsite disposal. When the Waste Oxides Facility is brought on line, this material will be used to make briquettes for use in the Basic Oxygen Furnaces.

Wastes Managed: This unit manages kish(flacked graphite particles) and iron oxides. According to the May 6 ,1987 PA/VSI report, this material is not hazardous, but it might contain hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on no observed or reported releases in the vicinity of this unit.

SWMU BOF 6- BOF Slag Pile

Photograph No(s).: R3P21

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1964, when the Basic Oxygen Furnaces began operation, until the present.

Location: This unit is located in the eastern portion of the facility, on the west side of the Basic Oxygen Furnace Building.

Physical Description: At the time of the VSI, this unit measured approximately 20 feet long and 10 feet wide and was situated on the ground with no secondary containment.

This unit manages BOF slag and metal generated during the desulfurization process. The molten iron from the Blast Furnaces is first transported to the Basic Oxygen Furnaces. The molten iron is then poured into a ladle and sent to the desulfurization process. During the desulfurization process, lime and powdered magnesium are added to the molten iron. The ladle is then tilted and the slag is skimmed into the desulfur slag pot and transported to the BOF Slag Pit (SWMU BOF 8). The slag that does not get poured into the slag pot and any scrap metal that needs to be separated out are transported to this unit and cooled. The cooled slag is then taken to the BOF Slag Pit, which is operated by a subcontractor, and the scrap metal is sold back to the facility by the subcontractor.

Wastes Managed: This unit stores desulfur slag that contains scrap metal. Based on the contents of the other materials generated at the Basic Oxygen Furnaces, this material is non-hazardous, but it might contain hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based the non-hazardous nature of the materials stored at this unit and no release history or evidence of release.

SWMU BOF 7 - BOF 55 Gallon Drum Pick Up Area

Photograph No(s).: R5P20

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1964, when the Basic Oxygen Furnaces began operation, until the present.

Location: This unit is located in the western portion of the facility on the south side of the Waste Oxides Facility south of the Basic Oxygen Furnace Building.

Physical Description: This unit is an old steel building that measures approximately 60 feet tall, 40 feet long, and 30 feet wide with no secondary containment. At the time of the VSI, two trucks were being stored at this unit that transport fine and course dust from the Course and Fine Dust Hopper (SWMU BOF 4) to a type three landfill.

Wastes Managed: It could not be determined from the available file material or during the VSI if this unit managed a waste.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on no release history or evidence of release.

SWMU BOF 8 - BOF Slag Pit

Photograph No(s).: R5P0, R5P1 and R5P2 (did not develop)

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1964, when the Basic Oxygen Furnaces began operation, until the present.

Location: This unit is located in the southwestern portion of the facility, west of the Electric Arc Furnace Building.

Physical Description: This unit is earthen lined and measures approximately 25 feet long, 50 feet wide, and has varying depths. The southern portion of this unit is used to store the slag generated at the Basic Oxygen Furnaces during the desulfurization process. The slag is skimmed from the desulfur slag pot and transported to this unit by a subcontractor where it is cooled and sold back to the facility for use in the Blast Furnaces as a substitute for limestone. It could not be determined during the VSI or from the available file material if the subcontractor is responsible for recovering the limestone from the slag.

The northern portion of this unit is used to store skulls, the metal that adheres inside the ladles. These skulls are knocked out of the Blast Furnace ladles and the Basic Oxygen Furnaces ladle at Gate 12 of the facility by a subcontractor. The subcontractor transports the skulls to this unit and sells them back to the facility. The skulls are also sold offsite by the subcontractor. Both iron skulls from the Blast Furnaces and steel skulls from the Basic Oxygen Furnaces are stored at this unit.

Prior to this unit, the skulls from the Blast Furnace ladles were stored at the Ladle Dumping Pit (SWMU BOF 8a), located inside the Pig Cast Building and identified in the May 6, 1987 PA/VSI report as SWMU 2. According to the report, between 1952 and December 2, 1981, the molten iron from the ladles was first poured at a controlled rate into a trough and runner system through which the iron would run to the pig machine from which pig iron was produced for use in foundries. The machine was composed of an endless chain of molds that moved along an inclined track from beneath the runner to a head sprocket located over a railroad car. As the mold chain moved, the molds were sprayed with a lime water mix to coat the molds and prevent the molten iron from sticking to the mold. The overspray and drain-off would drop onto a cement pad that drained to the Ladle Settling Pit (SWMU BOF 8b), located at the Pig Cast Building. The solids would settle out and the water would overflow into a storm sewer. The pit was cleaned at least twice a week. The Ladle Settling Pit is identified in the May 6, 1987 PA/VSI report as SWMU 3.

After pouring the molten iron into the pig machine, the ladles were then cleaned at the Pig Cast Building, which was located on Ford's property adjacent to the Dearborn Assembly Plant. The ladles were cleaned by removing the skull from around the mouth with a ram. Then, the ladle was rotated to an inverted position over the Ladle Dumping Pit to allow the skull and any molten metal and/or slag to drop out. The Ladle Dumping Pit was earthen lined and covered with a steel grating.

SWMU BOF 8 - BOF Slag Pit (Continued)

Currently, the Pig Cast Building is the DAP Paint Building. The Ladle Dumping Pit was cleaned two times per week, and the material was sold to a vendor who removed the waste to an offsite location for processing.

Wastes Managed: This unit manages non-hazardous BOF slag and steel skulls and BF iron skulls. Although these materials are non-hazardous, based on the other materials generated in the iron and steel making processes, these wastes might contain hazardous constituents that are negligible.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the non-hazardous classification of the wastes managed at this unit and no release history or evidence of release.

SWMU EAF 1 - Former Tar Sludge Landfill

Photograph No(s): R4P26

Period of Operation: This unit was in operation from 1915 until 1956.

Location: This unit was located in the southern portion of the facility, on the north side to the Electric Arc Furnace.

Physical Description: The material of construction and the dimensions of this unit could not be determined during the VSI or from the available file material.

According to a Notification of Hazardous Waste attached to a letter dated January 6, 1986, this unit stored coke oven tar sludge (K087) generated during the extraction of tar from the coke oven gas. During extraction, the coke oven gas was first cooled with an ammonia liquor prior to entering precipitators, where tar particles were attracted to the sides of the precipitator pipes. The tar then dropped to the bottom of the precipitators where it was pumped to tar decanters. In the tar decanter, the tar and ammonia liquor were separated by gravity. It is believed, but could not be confirmed, that the coke oven tar sludge was stabilized at the Coke Oven Tar Sludge Decanter Staging Area (SWMU CP 4) with coke breeze and then disposed of in this unit until 1956.

Wastes Managed: This unit managed coke oven tar sludge (K087).

History of Releases: A hazardous material was placed onto or into the ground at this location for approximately 40 years..

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

Conclusions: Further action is warranted based on historical disposal of hazardous waste at this location.

SWMU EAF 2- EAF Silo

Photograph No(s).: R4P28

Period of Operation: This unit was in operation from 1976 until 1992.

Location: This unit is located in the southern portion of the facility on the southern side of the Electric Arc Furnace, east of the EAF Shop Hopper (SWMU EAF 3).

Physical Description: This unit is constructed of steel and measures approximately 53 feet tall, 5 feet long, and 3 feet wide. The capacity of this unit was not identified during the VSI or from the available file material.

This unit stored the EAF dust (K061) generated during the production of molten steel from cold steel scrap, iron charge, and fluxes. As these materials were heated, hazardous dust was generated. According to the May 6, 1987 PA/VSI report, the dusts that were generated were collected in the EAF baghouse and then dispensed in the EAF Shop Hopper (SWMU EAF 3). Once the dust was collected in the EAF Shop Hopper, screw conveyors transported the dust to a pneumatic system. This system then carried the dust to the EAF Silo for storage prior to being removed daily to an offsite treatment facility by a vendor.

Wastes Managed: This unit managed EAF dust (K061) that contained traces of lead and zinc.

History of Releases: Between July 1, 1987 and June 26, 1991, Rouge Steel submitted 15-day letters to U.S. EPA Region 5 with incident reports attached describing releases of EAF dust (K061) to the environment. There were releases of EAF dust (K061) from the pneumatic dust transport system, and the EAF Dust Silo (SWMU EAF 2). Some of the causes of these releases were failure of the level indicator on the surge hopper, failure of the seal on the No. 4 compartment rotary lock, and failure of the upper level limit on the EAF Dust Silo. During each release, there were no injuries, the release was confined to the EAF, and the released material was disposed of in a hazardous waste landfill offsite.

Potential for Past/present Release:

High	**(X)**
Moderate	**( )**
Low	**( )**

Conclusions: Further action is warranted based on the release history of this unit. It is recommended that the facility provide documentation of any sampling that was performed at this unit. If sampling was not conducted at this unit, it is recommended that the facility conduct confirmatory sampling at this unit to find if any of these releases impact the soil. Also, the facility needs to provide information on what was done to remedy the releases at this unit.

SWMU EAF 3 - EAF Shop Hopper

Photograph No(s).: R4P27

Period of Operation: This unit was in operation from 1976 until 1992.

Location: This unit is located in the southern portion of the facility on the southern side of the Electric Arc Furnace, west to the EAF Silo (SWMU EAF 2).

Physical Description: This unit was not present at the time of the VSI. Therefore, a physical description of this unit can not be provided. It is reasonable to believe that this unit was constructed of steel based on the material of construction for other similar units. This unit was situated under the EAF baghouse that is constructed of steel and comprised of fourteen compartments. No secondary containment was present at this unit.

The unit was used to collect the EAF dust (K061), generated during the steel making process at the Electric Arc Furnace, from the EAF baghouse. From this unit, the dust was conveyed to the EAF Silo (SWMU EAF 2) prior to being transported to an offsite treatment facility.

Wastes Managed: This unit managed EAF dust (K061), a dry, reddish brown, odorless powdery solid, that contained traces of zinc and lead.

History of Releases: On June 26, 1991, Rouge Steel informed U.S. EPA Region 5 that a release of 7 yd^3 of EAF dust (K061) occurred from the EAF baghouse. The material was confined to the immediate area until clean up was complete.

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

Conclusions: Further action is warranted based on the release history of this unit. It is recommended that the facility provide supporting documentation that all of the released material was removed from this unit. It is suggested that copies of any sampling that was performed at this unit be provided.

SWMU LRF 1 - Vacuum Degasser Recycling System

Photograph No(s).: R3P20, R3P22 and R3P23

Period of Operation: This unit has been in operation from the 1980s until the present.

Location: This unit is located inside the north end of the Continuous Caster Building, adjacent to the Ladle Refining Facility No. 1.

Physical Description: This system is designed to remove solids from water used in the process of vacuuming dissolved gasses from molten steel. The hot gasses from this process are conveyed to the Ladle Refining Facility No. 1 and the Vacuum Degasser System Baghouse (SWMU LRF 2). This unit consists of the following components: Lamella Settling Tank (SWMU LRF 1a), Cooling Towers (SWMU LRF 1b), Plate Filter Press (SWMU LRF 1c), and the Filter Cake Area (SWMU LRF 1d).

Facility representatives were not certain at what point in the degassing process the water comes into contact with the solids and dissolved gases, however the contact water is pumped to the Lamella Settling Tank (SWMU LRF 1a). This enclosed, steel tank is located inside of the building, and is equipped with a series of rectangular baffles inside the tank to increase the settling capabilities of the unit. The overflow is returned to the degasser system by way of the Cooling Towers (SWMU LRF 1b). The solids are conveyed to the Plate Filter Press (SWMU LRF 1c). The JWI Plate Filter Press is located inside the building, elevated on a metal platform, located at a lower level than the Lamella Settling Tank and directly above the Filter Cake Area (SWMU LRF 1d). The filter cake from the Plate Filter Press drops through the floor to the Filter Cake Area. The Filter Cake Area was observed to contain some sludge at the time of the VSI, and has estimated dimensions of 12 feet by 24 feet. The garage-like area is constructed at the north east corner of the building, with the wall of the building serving as the eastern wall of the Filter Cake Area. The floor of the unit is concrete and is equipped with a grated drain at the front of the unit. According to the facility representative, the filter cake is transported to the New Debris Pile (SWMU MIS 10) for offsite disposal.

Wastes Managed: This unit removes solids and dissolved gasses from contact water generated in the Vacuum Degassing Process of the steel refining process. Filter cake is generated as a result of this system.

History of Releases: No documented evidence of release from this unit in the available file material.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: The unit is housed inside the building and manages wastes with reportedly low levels of hazardous constituents. Thus the potential for release is low.

SWMU LRF 2 - Ladle Refining Facility No. 1 and the Vacuum Degasser System Baghouse

Photograph No(s).: R3P24

Period of Operation: This unit has been in operation since 1989 until the present.

Location: This unit is located in the eastern portion of the facility, adjacent to the Vacuum Degasser Recycling System (SWMU LRF 1), east of the Continuous Caster Plant.

Physical Description: This unit is constructed of steel and has a capacity of 175,000 ft^3. This unit has five individual compartments that rest on top of 1 ft^3 square dust collection boxes situated on the ground. Only one compartment was photographed at the time of the VSI.

This unit captures the dust generated in the Ladle Refining Facility No. 1 and the Vacuum Degasser System. Both of these units remove gaseous impurities from molten steel produced in the Basic Oxygen Furnaces. In the Ladle Refining Facility No. 1, which is located inside the north end of the Continuous Caster Plant, ladles of molten steel are reheated to burn off certain contaminating gases, including hydrogen, nitrogen, and oxygen. In the Vacuum Degasser System, located to the west of the Drum Storage Area (SWMU CCS 3), the molten steel is subjected to a vacuum that removes the gaseous impurities. The dust generated from these processes is collected in the dust boxes located under this unit. The dust from the dust boxes is suctioned out and then transported to the New Debris Pile (SWMU MIS 10). From the New Debris Pile, the material will be disposed of in an offsite landfill.

Wastes Managed: This unit manages ladle refining and vacuum degasser dust. Based on the description of the dusts generated in the Basic Oxygen Furnaces, where the molten steel is transported from, the wastes managed by this unit are non-hazardous. It is possible that this unit does contain hazardous constituents in negligible amounts.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment structure, no release history, or evidence of release.

SWMU LRF 3- Ladle Refining Facility No. 2 Baghouse

Photograph No(s).: R4P25

Period of Operation: This unit has been in operation from the 1980s until the present.

Location: This unit is located in the eastern portion of the facility on the southern side of the Continuous Caster Plant, east of the Continuous Caster Recycle System (SWMU CCS 2).

Physical Description: This unit is constructed of steel and has an unknown capacity. This unit is situated over a steel hopper, situated on the ground, that has an approximate capacity of 1 yd^3.

In the Ladle Refining Facility No. 2, which is located inside the south end of the Continuous Caster Plant, ladles of molten steel are reheated to burn off certain contaminating gases, including hydrogen, nitrogen, and oxygen. The dust generated from this process is collected in this unit and then transported to the New Debris Pile (SWMU MIS 10). From the New Debris Pile, the material will be disposed of in an offsite landfill.

Wastes Managed: This unit manages ladle refining dust. Based on the description of the dusts generated in the Basic Oxygen Furnaces, where the molten steel is transported from, the wastes managed by this unit are non-hazardous. It is possible that this unit does contain hazardous constituents in negligible amounts.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment structure, no release history, or evidence of release.

SWMU CCS 1- 12A Lagoon

Photograph No(s).: R2P13 and R2P14

Period of Operation: This unit has been in operation from an unknown date until the present.

Location: This unit is located in the eastern portion of the facility to the east of the Electric Arc Furnace.

Physical Description: This unit is an earthen lined impoundment and measures approximately 180 feet wide at its widest part and 480 feet long. At the time of the VSI, this unit was full of standing liquid. An oil boom was located in the northern portion of the unit. This unit is sampled twice a week.

This unit was constructed to provide protection against accidental loss of oil to the Rouge River. This unit receives blowdown from the cooling towers of the Continuous Caster Recycle System (SWMU CCS 2), stormwater, and non-contact cooling water generated throughout the facility. The outflow from this unit ultimately discharges into the Rouge River.

On July 26, 1977, Ford Motor Company requested approval from MWRC to dredge this unit. According to this document, the unit had filled with sediment to the extent that cleaning was required to assure adequate retention time of the wastes. Ford estimated that the dredging would take approximately two months, and during this time, the waste received by this unit would be diverted to another outfall and then to the Rouge River. A boom would be installed at the outfall to prevent oil from being released to the River. According to the facility representatives, this unit has been dredged at least once.

Wastes Managed: This unit manages blowdown from the Continuous Caster Recycle System (SWMU CCS 2), stormwater and non-contact cooling water.

History of Releases: There were no reported or observed releases at the time of the VSI. However, the intended use of this impoundment is to catch spills before they reach the river. Any released material held in this unit would have direct contact with underlying soil.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**(X)**
	Low	**( )**

Conclusions: Further action is warranted based on the lack of secondary containment at this unit. It is recommended that during the next sampling event at this unit, the facility collects soil from the bottom of the unit for sampling.

SWMU CCS 2 - Continuous Caster Recycle System

Photograph No(s).: R3P7, R3P8, R3P9, R3P10, R3P11, R3P12, R3P13, R3P14, R3P15, R3P16, R3P17 and R3P18

Period of Operation: According to facility representatives Strand 1&2 came into operation in 1984 and Strand 3 was added in 1995. It is assumed the CCRS came online within this time frame. The system is in use although not all components are currently operational.

Location: This unit is located to the south of the Continuous Caster Plant, west of the Ladle Refining Facility No. 2 Baghouse (SWMU LRF 3).

Physical Description: This system consists of the various units and associated piping for the treatment of oily wastewater generated in the production lines of the Continuous Caster Building. The purpose of the unit is to separate oils and solids from the water so that it can be recycled through the system. The components of the system include:

CCS 2a -	CCS Trenches
CCS 2b -	East CCS Scale Pit
CCS 2c -	West CCS Scale Pit
CCS 2d -	East and West CCS 100 Gallon Waste Oil Tanks
CCS 2e -	East and West CCS Waste Oil Receiving Tanks
CCS 2f -	CCS Scale Pile
CCS 2g -	CCS Sand Filters
CCS 2h -	CCS Cooling Towers
CCS 2i -	CCS Strand 1&2 Clarifier
CCS 2j -	CCS Strand 3 Clarifier
CCS 2k -	CCS Plate Filter
CCS 21 -	CCS Filter Cake Hopper

Oily, scale waste is collected in concrete, grated CCS Trenches (SWMU CCS 2a) located within the flooring of the Strand 1&2 and Strand 3 production lines. The waste is conveyed to the outdoor scale pits, with Strand 1&2 wastes conveyed to the East CCS Scale Pit (SWMU CCS 2b) and the Strand 3 wastes conveyed to the West CCS Scale Pit (SWMU CCS 2c). The below grade scale pits run parallel to each other with estimated dimensions of 30 feet by 60 feet and 40 feet deep. The pits are constructed of concrete. The scale settles to the bottom of the scale pits and is cleaned out by clam bucket once every 3 to 4 weeks. The removed scale is staged at the CCS Scale Pile (SWMU CCS 2f) located between the East and West CCS Scale Pits (SWMUs CCS 2b and 2c) on a concrete paved surface. At the time of the VSI, there was some scale and standing water in the vicinity of the CCS Scale Pile. The concrete pavement appeared to be cracked.

SWMU CCS 2 - Continuous Caster Recycle System (Continued)

Each scale pit is equipped with an oil skimmer which discharges oily water into the East and West 100 Gallon Waste Oil Tanks (SWMU CCS 2d). These tanks are located on a platform at their respective scale pits. The oily water contents of these tanks are pumped approximately 4 times a day to the East and West CCS Waste Oil Receiving Tanks (SWMU CCS 2e). These steel storage tanks are reported to be 6000 gallons in capacity, and the contents vacuum-pumped once every one or two weeks for removal offsite. The East and West CCS Waste Oil Receiving Tanks (SWMU CCS 2e) are located within a secondary containment pit, which is constructed of concrete and measures approximately 6 feet by 10 feet and 2 feet high. Additionally, there is a curbed, containment pad, also constructed of concrete, adjacent to the tanks to provide secondary containment for the pump trucks during oil removal.

Wastewater from the East and West CCS Scale Pits is pumped to the CCS Sand Filters (SWMU CCS 2g), located inside the CCS Recycle System Building for water filtration. The nine gravity flow filters, 100 square feet each, were not operational at the time of the VSI. Facility representatives explained this was since BF C is offline reducing the solids in the waste stream. When the units are on-line, the units operate on a continuous-clean cycle with no need to clean out sand filtration medium. The filtered water is conveyed to the CCS Cooling Tower (SWMU CCS 2h) and then conveyed back to the Continuous Caster for reuse. The blowdown from the CCS Cooling Tower is conveyed through the Sewer Lines (SWMU MIS 5) to the 12 A Lagoon (SWMU CCS 1). The backwash from the sand filters is pumped to the CCS Strand 1&2 Clarifier and CCS Strand 3 Clarifier (SWMUs CCS 2i and 2j) according to the original source of wastewater. The open-topped, steel Strand 1&2 Clarifier is 80,000 gallons in capacity, while the Strand 3 Clarifier, also steel and open-topped, is 48,800 gallons in capacity. Both Clarifiers rest directly on a concrete pad with no secondary containment.

Solids which settle in the clarifiers are conveyed to the CCS Plate Filter (SWMU CCS 2k). The plate filter separates the solids and discharges them into the CCS Plate Filter Hopper (SWMU CCS 2l) located immediately below. The estimated dimensions of the CCS Plate Filter Hopper are 15 feet wide by 30 feet long with a concrete, paved floor. The roofed unit is constructed against the side of the CCS building which serves as the eastern wall of the unit. The south and western walls are constructed of concrete containment walls approximately 5 feet tall. The north end is open to allow periodic removal of the Filter Plate Solids for off-site disposal. Water from the CCS Plate Filter (SWMU CCS 2k) and the CCS Clarifiers (SWMUs CCS 2i and 2j) is conveyed back to the Scale Pits (SWMU CCS 2b and 2c).

At the time of the VSI, there were puddles of standing water, possibly rain water, along the drive in and around the CCS. There were some areas of residuals from filter plate solids and scale observed in the drive area.

SWMU CCS 2 - Continuous Caster Recycle System (Continued)

Wastes Managed: This unit manages oily wastewater containing hydraulic oils, grease and scale. The scale is flakes of oxidized metal which forms on the surface of the exposed metal and falls during the slabbing process.

History of Releases: There are no documented releases in the available file materials.

Potential for Past/present Release:		
	High	( )
	Moderate	(X)
	Low	( )

Conclusions: There is a moderate release potential due to the nature of scale removal operations, the observed wastes on the drive area, and the observed integrity of the drive.

SWMU CCS 3 - Drum Storage Area

Photograph No(s).: R3P19

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1980s, when the Continuous Caster System began operating, until the present.

Location: This unit is located in the eastern portion of the facility adjacent to the Ladle Refining Facility.

Physical Description: This unit is located in front of an air conditioned, corrugated steel building that measures approximately 20 feet long, 10 feet tall, and 10 feet wide. At the time of the VSI, this building was locked, and therefore, the contents could not be observed.

It was not determined during the VSI or from the available file material, what wastes were stored at this unit or inside the building. According to the facility representative, the wastes were stored outside of the building on the ground.

Wastes Managed: It was not determined what wastes were stored at this unit.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the no release history or evidence of release.

SWMU FSM 1 - Former Slab Mill Scale Pit

Photograph No(s).: R5P8

Period of Operation: This unit was in operation from 1964 until the late 1990s.

Location: This unit was located on the southern end of the Former Slab Mill (FSM). This mill is no longer in operation.

Physical Description: The unit comprises the pit and associated equipment used to collect, treat and store oily wastewater generated in the FSM. This unit consists of the FSM Trenches (SWMU FSM 1a), FSM Scale Pit (SWMU FSM 1b), and the FSM Waste Oil Tank (SWMU FSM 1c). Oily wastewater, containing scale, was collected inside the Slab Mill in concrete, grated FSM Trenches (SWMU FSM 1a) and discharged to the southern end of the below-grade FSM Scale Pit (SWMU FSM 1b). The estimated dimensions of the concrete FSM Scale Pit are 50 feet by 25 feet and 20-25 feet deep. At the time of the VSI, the pit was mostly dry with some piles of unidentified materials (possibly slag) so that the integrity of the concrete pit could not be verified.

The unit was designed so that the solids, mostly scale, would settle to the bottom of the pit. The scale was periodically removed by clam bucket and sold offsite.

The Scale Pit was equipped with an oil skimmer to skim oil from the wastewater surface. The collected oil was stored in the FSM Waste Oil Tank (SWMU FSM 1c). At the time of the VSI, the skimmer and oil tank were no longer present at the site. According to the facility representative, the collected oils were probably removed by a contractor for offsite recycling.

The resultant wastewater was reportedly either recirculated or conveyed through the Sewer Lines (SWMU MIS 5) to SRWWTP.

At the time of the VSI, the area surrounding the FSM Scale Pit was covered by Slab Mill Scale Piles (SWMU FSM 2) preventing the inspection of adjacent soils. It is likely, however, that scale was dumped to the ground for drainage prior to removal. According to the facility representatives, the scale was sold off site to a scinter plant.

Wastes Managed: This unit managed a slurry of wastewater containing oils and scale from milling operations. Scale is flakes of oxidized metal, which form on the exposed surface of the steel and falls off during the milling process.

History of Releases: There is no recorded history of release for this unit. However, due to the presence of the Slab Mill Scale Piles, the ground surrounding the pit could not be inspected for evidence of release. Given the nature of scale removal operations, it is likely that oily residues were routinely released in the vicinity of the unit.

SWMU FSM 1 - Former Slab Mill Scale Pit (Continued)

Potential for Past/present Release:	**High**	**( )**
	Moderate	**(X)**
	Low	**( )**

Conclusions: Due to the nature of scale removal operations, it is likely that routine releases occurred, however the non-hazardous nature of the waste streams renders the potential for release to be moderate.

SWMU FSM 2 - Slab Mill Scale Piles

Photograph No(s).: R5P7 and R5P9

Period of Operation: Unknown to present. According to facility representatives, accumulation of wastes for use in the WOF began in 1998.

Location: This unit is located along the south side of the Former Slab Mill.

Physical Description: This unit comprises many piles of scale, which is being stockpiled for use in the WOF. At the time of the VSI, many piles of over 1000 cubic yards were observed stored directly on the ground with no secondary containment. The piles surround the Former Slab Mill Scale Pit (SWMU FSM 1) and the Former Scarfer Grit Scale Pit (SWMU FSM 3). According to the facility representatives, the scale is brought to the Slab Mill Scale Piles from the various staging areas associated with active scale pits (HSM Scale Staging Areas (SWMU HSM 1d) and CCS Scale Pile (SWMU CCS 2f). The scale is to be used as feedstock in the WOF.

At the time of the VSI, erosion of the waste piles was observed with runoff migrating to adjacent soils.

According to the facility representative, it will take an estimated one year to utilize the existing stockpile of scale in the WOF, once it is fully operational.

Wastes Managed: Scale removed from active scale pits (North and South HSM Scale Pits and CCS East and West Scale Pit (SWMUs HSM 1 and CCS 2b and 2c).

History of Releases: There is no documented evidence of release from this unit within available file materials..

Potential for Past/present Release:		
	High	**( )**
	Moderate	**(X)**
	Low	**( )**

Conclusions: A large volume of wastes containing some level of hazardous constituents are stored directly on the ground over a period of two to three years. Therefore the release potential is moderate and confirmatory sampling should be conducted.

SWMU FSM 3 - Former Scarfer Grit Scale Pit

Photograph No(s).: R5P10 and R5P11

Period of Operation: This unit was in operation from 1964 until the late 1990s.

Location: This unit is located adjacent to the Former Slab Mill, at the south side. It is located immediately west of the pump house and is currently surrounded by Slab Mill Scale Piles (SWMU FSM 2).

Physical Description: The unit is comprised of the pit and associated units used to collect, treat and store oily wastewater generated in the FSM. This unit consists of the Scarf Pit and Trenches (SWMU FSM 3a), Former Scarfer Grit Scale Pit (SWMU FSM 3b), and the Former Scarfer Pit Waste Oil Tank (SWMU FSM 3c). Oily wastewater, containing scale and scarf, was collected inside the Slab Mill in grated-concrete, Scarf Pit and Trenches (SWMU FSM 3a) and discharged to the western end of the below-grade Former Scarfer Grit Scale Pit (SWMU FSM 3b). The indoor, concrete Scarf Pit is estimated to be 6 feet by 8 feet and is located below grade at the production floor. It collected the oily, scarf sludge generated in the milling operations and conveyed it by way of the concrete, grated trenches to the outdoor pit. The estimated dimensions of the concrete Former Scarfer Grit Scale Pit (SWMU FSM 3b) are 20 feet by 30 feet and 20 feet deep. The unit consists of three chambers. The Trenches discharged the oily wastewater to the Scarf Chamber, located on the western end of the pit. The two parallel Scale Chambers run perpendicular to the Scarf Chamber. At the time of the VSI, the pit contained standing liquid in all three chambers so the depth of the unit and integrity of the concrete floor could not be verified.

The unit was designed so that the solids, mostly scarf, would settle to the bottom of the pit. The scarf was periodically removed by clam bucket and sold offsite. The resultant wastewater was reportedly either recirculated or conveyed through Sewer Lines (SWMU MIS 5) to SRWWTP.

According to facility representatives, it is likely that the Former Scarfer Grit Scale Pit (SWMU 3b) was equipped with an oil skimmer to skim oil from the wastewater surface although there was no sign of a skimmer or Former Scarfer Pit Waste Oil Tank (SWMU FSM 3c). According to the facility representative the collected oils were probably removed by a contractor for offsite recycling.

At the time of the VSI, the area surrounding the FSM Scale Pit was covered by Slab Mill Scale Piles (SWMU FSM 2) preventing the inspection of adjacent soils.

Wastes Managed: This unit managed a slurry of wastewater containing oils, scarf and scale from milling operations. Scarf and scale are flakes of oxidized metal that forms on the exposed surface of the steel and falls from the surface of the steel as it is milled. Although not a hazardous waste, it is likely these materials contain hazardous constituents.

SWMU FSM 3 - Former Scarfer Grit Scale Pit (Continued)

History of Releases: There is no recorded history of release for this unit. However, due to the presence of the Slab Mill Scale Piles (SWMU FSM 2), the ground surrounding the pit could not be inspected for evidence of release. Given the nature of scale removal operations, it is likely that oily residues were routinely released in the vicinity of the unit.

Potential for Past/present Release:		
	High	( )
	Moderate	(X)
	Low	( )

Conclusions: Due to the nature of scarf/scale removal operations, it is likely that routine releases occurred, however the non-hazardous nature of the waste streams renders the potential for release to be moderate.

SWMU FSM 4 - Soak Pit Debris Pile

Photograph No(s).: None.

Period of Operation: It is not known when this unit was in operation.

Location: This unit was located in the basement of the Former Slab Mill.

Physical Description: According to the facility representative, the Soak Pit Debris Pile was located in the basement. The soak pits were used for heating of the steel ingots by radiant heat in past operations at the plant. There was no additional information available on this unit and it was not accessible since it was located in the basement of the closed and abandoned Former Slab Mill.

Wastes Managed: It is not known what wastes this unit managed. However, based on in the information received at the VSI, it is possible that this unit managed oily wastes and scale that were generated when the steel ingots were heated.

History of Releases: There is no documented evidence of release from this unit.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: Although there is limited information available on this unit, the potential for past release is thought to be low based on the indoor location of the unit and since there is no evidence of hazardous materials associated with the Soak Pit. The facility should determine what wastes were stored here, and what was the final disposition of these wastes.

SWMU HSM 1 - North and South Hot Strip Mill Scale Pits

Photograph No(s).: R5P12, R5P13, R5P16, R5P17, R5P18 and R5P19

Period of Operation: According to facility representatives, the units were likely constructed in the mid 1970s and upgraded and modified in the late 1980s.

Location: These units are located on the west side of the Hot Strip Mill. The North HSM Scale Pit (SWMU HSM 1b) is located outside adjacent to the Rougher Mills and the South HSM Scale Pit (SWMU HSM 1c) is outside adjacent to the Finishing Mills.

Physical Description: This unit includes two scale pits and the associated units that are used to collect, treat and store oily wastewater generated in the HSM. This unit consists of the following components:

HSM 1a-	HSM Trenches
HSM 1b-	North HSM Scale Pit
HSM 1c-	South HSM Scale Pit
HSM 1d-	HSM Scale Staging Areas
HSM 1e-	North Oily Waste Tank
HSM 1f-	South Oily Waste Tank
HSM 1g-	Former North Oily Waste Tank
HSM 1h-	Former South Oily Waste Tank.

Oily wastewater, containing scale, is collected inside the Rougher and Finishing Mills in concrete, grated HSM Trenches (SWMU HSM 1a) and discharged to the North (SWMU HSM 1b) and South HSM Scale Pits (SWMU HSM 1c), respectively. Due to time constraints, the HSM Trenches were not observed at the time of the VSI.

The below grade Scale Pits appear to be identical, are constructed of concrete, and consist of four separate compartments. The estimated dimensions of each scale pit are 30 feet wide by 75 feet long. At the time of the VSI, the pits contained standing liquid so the depths of the units could not be estimated. The HSM Trenches discharge to the north compartment of the North Scale Pit (south compartment for the South Scale Pit) for solids settling. Scale is removed from the pit on a weekly basis with clam buckets. According to the facility representatives, the scale is removed from the pits, placed on the ground adjacent to the pit in the HSM Scale Staging Areas (SWMU HSM 1d), and allowed to drain before it is removed to the Slab Mill Scale Piles (SWMU FSM 2) for stockpiling for use at WOF Facility. The HSM Scale Staging Areas appeared to be slag-covered soil located directly adjacent to the scale pits.

Three additional compartments, perpendicular to the first compartment, operate in parallel and are each equipped with rope skimmers to remove oil from the surface of the wastewater. The skimmed oil is pumped to the heated, insulated North and South Oily Waste Tanks (SWMUs HSM 1e and HSM 1f, respectively). These tanks, which were added during the upgrade conducted in the late 1980s, rest on

SWMU HSM 1 - North and South Hot Strip Mill Scale Pits (Continued)

platforms constructed below grade within the scale pits, but above the liquid level in the pits. Facility representatives estimated the capacities of each tank are approximately 8,000 to 10,000 gallons. The oil tanks are reportedly pumped out by a contractor approximately once a week and the oil is taken off-site for recycling. A curbed, concrete containment pad is located adjacent to each of the scale pits and is reportedly used by trucks for secondary containment as they pump out the oily wastes from the tanks.

An above grade containment pit is also located adjacent to each of the Scale Pits. The containment pits are estimated to be 12 feet by 12 feet and 3 feet deep. Facility representatives thought these pits served as secondary containment areas for Former North and South Oily Waste Tanks (SWMUs HSM 1g and 1h, respectively). The Former North Oily Waste Tank was located in the containment area, the Former South Oily Waste Tank was located on the east side of the South HSM Scale Pit, outside of the containment area. These tanks went out-of-service when replaced by the North and South Oily Waste Tanks (SWMUs HSM 1e and 1f).

After removal of the scale and oil, the resultant wastewater is either recirculated through the HSM Trenches or conveyed through Sewer Lines (SWMU MIS 5) to the SRWWTP.

At the time of the VSI, heavy oil staining was observed on the ground around the vicinity of the scale pits and the secondary containment pits, especially in the vicinity of the HSM Scale Staging Areas (SWMU HSM 1d). In some areas, fresh slag appeared to have been recently applied. According to the facility representatives, periodic application of slag is a routine activity in this area. On west side of the North HSM Scale Pit (SWMU HSM 1b), there were areas of standing water with an oily sheen. The above grade portion of the side walls of the Scale Pits are constructed with openings at grade to allow surface water to drain into the pits.

Wastes Managed: This unit treats oily wastewater containing scale from the milling operation. Scale is flakes of oxidized metal which forms on the exposed surface of steel and falls off during milling operations.

History of Releases: Oily stains were observed throughout the area of the North and South Scale Pits.

Potential for Past/present Release:

High (X)
Moderate ( )
Low ( )

SWMU HSM 1 - North and South Hot Strip Mill Scale Pits (Continued)

Conclusions: The removal of scale by clam bucket and vacuum pumping of waste oils appears to routinely cause spillage to the ground. Thus the potential is high for wastes to be released to environmental media. It is recommended that the soils immediately surrounding the North and South HSM Scale Pits (SWMUs HSM 1b and 1c) be sampled to determine if any soil contamination exists.

SWMU CRM 1 - PCB-Contaminated Oil UST

Photograph No(s).: Photograph R4P2 was not developed.

Period of Operation: This unit operated from 1927 until February 9, 1996.

Location: According to a letter from ABB Environmental Services, Inc. (ABB) to MDEQ dated February 2, 1996, this unit is buried beneath the basement floor of Electrical Substation 12B in the Cold Rolling Milling, which is in the northern portion of the facility. The unit is located against a wall on the west side of the substation and is surrounded by building footings on the north and south ends. The east side of the tank is adjacent to a narrow aisleway bordered by rows of high voltage electrical equipment.

Physical Description: This unit is steel and has a capacity of 1000 gallons. This unit was contained in a concrete vault. This unit was used to collect PCB-contaminated oil from leaking transformers in the substation 12B. This unit was closed on February 9, 1996. All of the steel piping was taken up from this unit, and the unit was closed in placed. The tank was not removed, instead, it was filled with concrete.

Wastes Managed: This unit managed water and PCB-contaminated oil.

History of Releases: According to a letter dated November 2, 1995 from Doepken, Keevican, & Weiss to MDEQ, a release of PCB-contaminated liquid from this tank was confirmed on October 21, 1995. This release was initially discovered on October 12, 1995 during a review of historical documents. On October 16, 1995, analytical results from the liquid inside the tank revealed that the oily layer contained PCB contamination in excess of 1,000 ppm. Analysis of the water layer showed PCBs at less than 100 ppb. On October 21, 1995, Marine Pollution Control (MPC) removed water from the concrete vault around the tank lid, and a Rouge employee noticed that liquid was leaking from the tank lid to water in the concrete vault. At this time MPC and Rouge worked to relieve hydraulic pressure on the tank to minimize any migration and to pump out the tank. All of the liquid that was removed was stored in onsite containers and disposed of offsite.

As of October 28, 1995, Rouge Steel and MPC had successfully reduced the pressure on this unit. They had also withdrawn all the liquid from the tank and plugged the overflow pipe. The initial inspection of the inside of the tank revealed that the tank was sound.

Rouge hired ABB to come up with a remedial investigation plan to determined the nature and extent of any contamination resulting from the tank. According to a letter dated February 2, 1996, a summary of the corrective actions and sampling activities performed was included in a Leaking UST Closure Report dated January 19, 1996. This report was not found in the available file material.

SWMU CRM 1 - PCB-Contaminated Oil UST (Continued)

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

Conclusions: Since a leak was discovered from this unit, it is recommended that sampling be performed at this unit if the contents of the closure report can not be found.

SWMU CRM 2- North and South Neutralization Areas

Photograph No(s).: R4P3, R4P4, R6P4, and R6P6. Photographs R4P3 and R4P4 did not develop due to camera malfunctions.

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1935 or the 1960s, when the Cold Rolling Mill was rebuilt, until the present.

Location: These units are located inside the Cold Rolling Mill in the northern portion of the facility. These unit are also located to the south of the Spent Pickle Liquor Holding Tank (SWMU CRM 3).

Physical Description: These units consist of a fiberglass tank with a capacity of 20,000 gallons and a concrete pit that measures approximately 30 feet long, 30 feet wide, and 20 feet deep. The tank is located over concrete, approximately 10 feet below grade. The tank is referred to as the North Neutralization Area (SWMU CRM 2a) and the pit is referred to as the South Neutralization Area (SWMU CRM 2b).

These units store rinse water generated at the pickle lines. According to a letter from Rouge Steel to MDNR dated July 26, 1991, the North Neutralization Area collects rinse water from the No. 4 pickle line, which is composed of an uncoiler, a looping pit, four acid tanks, wringer rolls, a rinse tank, a second set of wringer rolls, and a recoiler, all in series. The North Neutralization Area also collects water from the fume scrubber. The South Neutralization Area collects rinse water from the No. 1 and 3 pickle lines. The No. 1 and 3 pickle lines consist of the same components as the No. 4 pickle line, except these lines only contain two acid tanks.
These rinse waters are generated during the "pickling", removal of iron oxide and other oxidizing impurities, of the steel coils. The steel coils are transported to the Cold Rolling Mill were they are passed through three pickling lines. At the pickle lines, the steel coil is first uncoiled and then sent through a looping pit. After the looping pit, the steel coil, which has been converted to a steel strip, is then passed through acid tanks were hydrochloric acid is sprayed to remove iron oxide (scales) and other oxidizing impurities. After the steel strip passes through the last acid tank, wringer rolls remove most of the acid which drains back to the last tank. The strip then enters a rinse tank which uses a continuous flow of water to remove the remaining acid solution from the surface of the steel strip. The rinse tank at the No. 4 pickle line overflows through pipes to the North Neutralization Area. The rinse tanks at the No. 1 and 3 pickle lines overflow through the Cold Mill Sumps (SWMU CRM 10) through concrete floor trenches and then to the South Neutralization Area.

At the North Neutralization Area, caustic solution is added to the rinse water and the water from the fume scrubber, used to control the fumes emitted from the pickling lines. At this area, the pH of the rinse water is monitored and caustic is added proportionally. After the pH has reached 8, the water is sent through Sewer Lines (SWMU MIS 5) to the Schaefer Road Wastewater Treatment Plant where it is treated prior to discharge to the Rouge River.

SWMU CRM 2- North and South Neutralization Areas (Continued)

Originally, the South Neutralization Area was also to be used for neutralizing the rinse water, but this process was not successful. According to a letter dated July 26, 1991 describing a spill, one of the Cold Mill Sumps (SWMU CRM 10) under the No. 4 pickle lines, which has a sloped bottom, led to a concrete trench which led to a tank, believed to be the South Neutralization Area. The tank was used as an additional neutralization tank, but the practice was discontinued and the caustic feed lines were removed when it was discovered that additional neutralization was unnecessary. Currently, this area is used to monitor the pH of the rinse water from the No. 1 and 3 pickle lines. The rinse water first flows through concrete trenches to this area before being sent through the Sewer Lines (SWMU MIS 5) to the Schaefer Road Wastewater Treatment Plant and then to the Rouge River.

Wastes Managed: These units managed rinse water from the pickle lines and water from the fume scrubber.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment, and no release history or evidence of release.

SWMU CRM 3 - Spent Pickle Liquor Holding Tank

Photograph No(s).: R6P7

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1935 or the 1960s, when the Cold Rolling Mill was rebuilt, until the present.

Location: This unit is located inside the Cold Rolling Mill Building in the northern portion of the facility, north of the North and South Neutralization Areas (SWMU CRM 2).

Physical Description: The rubber lined steel tank has a capacity of 25,000 gallons. This unit is situated over one of the Cold Mill Sumps (SWMU CRM 10) that collects any spills from this unit and returns them to this unit.

This unit manages spent pickle liquor (K062) generated during the removal of scale and other oxidizing impurities. As the steel strips pass through the acid tanks at the pickling lines, the acid flows in the opposite direction to the motion of the steel. The motion of the steel results in an uphill flow of spent pickle liquor toward the overflow end of the pickling lines. At the overflow end, the spent pickle liquor flows through a six-inch line into this unit. From this unit, the spent pickle liquor is pumped through a concrete trench to the Spent Pickle Liquor <90 Day Storage Tanks (SWMU CRM 4).

Wastes Managed: This unit manages spent pickle liquor (K062), a non-flammable, greenish liquid with an acidic odor, that contains chromium and lead.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment, and no release history or evidence of release.

SWMU CRM 4 - Spent Pickle Liquor < 90 Day Storage Tanks

Photograph No(s).: R4P5 and R4P6

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have began operation in 1935 or the 1960s, when the Cold Rolling Mill was rebuilt, until the present.

Location: These units are located in the western portion of the facility at the Pickle Acid Tank Farm, on the west side of the Cold Rolling Mill. These units are located adjacent to two hydrochloric acid tanks and a sodium hydroxide tank.

Physical Description: These units consist of three rubber lined steel tanks that have capacities of 40,000 gallons each. These units are positioned horizontally in cradle mounts over 12 feet of limestone. According to the 1996 Contingency Plan submitted to MDEQ on September 22, 1998, the limestone, assuming that it is composed of 75 % calcium carbonate, is capable of neutralizing pure hydrochloric acid, which is sufficient for neutralizing any leaks from these units.

These units manage spent pickle liquor (K062) from the Spent Pickle Liquor Holding Tank (SWMU CRM 3). The spent pickle liquor flows from the Spent Pickle Liquor Holding Tank through an epoxy coated concrete trench to these units. According to the 1996 Contingency Plan, the spent pickle liquor (K062) from these units is pumped out and used as a substitute for a commercial product in wastewater treatment plants. This method of disposal renders the spent pickle liquor non-hazardous by exemption.

Occasionally, iron containing residues must be cleaned from these units. The solids that are removed from these units are removed offsite by a licensed vendor as a hazardous waste and transported to a treatment and disposal facility.

Wastes Managed: These units manage spent pickle liquor (K062), a non-flammable, greenish liquid with an acidic odor, that contains chromium and lead.

History of Releases: According to the facility representative, there was an acid leak in 1996 at the Pickle Acid Tank Farm, where these units are located. This leak was reportedly caused by a failure in minel bolts. There has not been a problem at the tank farm since 1996.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

SWMU CRM 4 - Spent Pickle Liquor < 90 Day Storage Tanks (Continued)

Conclusions: No further action is warranted based on the materials of construction and secondary containment, and a spark test performed annually to test the integrity of the lining of these units. The leak potential is moderate because during the VSI the facility representative reported that there has been a historical problem around the bottom valve of these units.

SWMU CRM 5 - Tandem Mill Sump Oil Tank

Photograph No(s).: A photograph was not taken of this unit because it was not accessible in the basement of the Cold Rolling Mill.

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1935 or 1953 when the No. 1 tandem mill, located inside the Cold Rolling Mill, was modified, until the present.

Location: This unit is located in the northern portion of the facility in the Tandem Mill, which is located in the eastern portion of the Cold Rolling Mill.

Physical Description: This unit is located in the basement and is built into the concrete and covered with a grate. The material of construction and capacity of this unit was not known at the time of the VSI and was not found in the available file material. This unit was not accessible during the VSI.

This unit manages spent coolant generated in the cold reduction mills, called tandem mills. After the steel coils are pickled and sprayed with a corrosion resistant oil, the thickness of the coils are further reduced in the tandem mills. During this rolling operation coolant is applied directly to the rolls or coils to dissipate the heat produced during rolling and to provide lubrication. The excess coolant that results from this process drains to the Scrap Oil Drums (SWMU CRM 8) and is then pumped to this tank. The tank is pumped into a 9,000 gallon tanker truck before being pumped into a contractor's tanker truck and taken offsite.

Wastes Managed: This unit manages spent coolant that contains approximately 2 % oil.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment, and no release history or evidence of release.

SWMU CRM 6 - Roll Shop Silo and Dust Box

Photograph No(s).: R4P7

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1935, or in the 1960s when the Cold Rolling Mill was modified, until an unknown date.

Location: This unit was located in the northern portion of the facility inside the southern end of the Cold Rolling Mill. This unit was also located south of the J-9 Sludge Box (SWMU CRM 7).

Physical Description: This unit is no longer present at the facility, therefore the material of construction and dimensions are unknown.

This unit managed steel pellets that were produced from blasting the surfaces of the tandem mill rolls. The surface of the rolls were shot blasted so that the tandem mill rolls would grab onto the steel coils better. The surface of the rolls were blasted and the excess steel would then fall into this collection box where it was stored until offsite disposal. Currently, the tandem mill rolls are shot blasted outside of the Cold Rolling Mill. A silo may have been present at this unit, but it was not determined during the VSI or from the available file material the purpose of this unit. Currently, this area is overlain by gravel.

Wastes Managed: This unit managed steel pellets.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on no release history or evidence of release.

SWMU CRM 7 - J-9 Sludge Box

Photograph No(s).: R4P8

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1935, or in the 1960s when the Cold Rolling Mill was modified, until the present.

Location: This unit is located in the northern portion of the facility in the Cold Rolling Mill, north of the Roll Shop Silo and Dust Box (SWMU CRM 6).

Physical Description: This unit is a sump constructed of concrete that measures approximately 12 feet long, 8 feet wide, and 2 feet deep. This unit is covered with a metal grate.

This unit manages spent oil and water generated at the lathe at the tandem mills. The lathe is used to grind the surface of the tandem mill rolls and then spray them with corrosion resistant oil prior to placing steel coils on them. Swarf and spent oil are generated at the lathe. The swarf is collected in a waste management box and then taken offsite for disposal in a type two landfill. The spent oil flows from the lathe through a concrete trench that measures approximately 20 feet long and 1 foot wide to this unit. The spent oil and water from this unit is pumped out by a contractor and taken offsite.

Wastes Managed: This unit manages spent oil and water.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU CRM 8 - Scrap Oil Drums

Photograph No(s).: R4P10

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that these units could have began operation in 1935, or in the 1960s when the Cold Rolling Mill was modified, until the present.

Location: These units are located in the northern portion of the facility inside the Cold Rolling Mill, east of the Z-46 (Z-47) Waste Oil Tanks (SWMU CRM 9).

Physical Description: These units are constructed of steel and have a capacity of 55-gallons. These units are situated over concrete. The purpose of these units is to store waste coolant that contains 2% oil generated in the tandem mills. The spent coolant is pumped from these units to the Tandem Mill Sump Oil Tank (SWMU CRM 5).

Wastes Managed: These units store spent coolant that contains 2% oil.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU CRM 9 - Z-46 (Z-47) Waste Oil Tanks

Photograph No(s).: R4P11

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have began operation in 1935, or the 1960s when the Cold Rolling Mill was modified, until the present.

Location: These units are located in the northern portion of the facility inside the Cold Rolling Mill, west of the Scrap Oil Drums (SWMU CRM 8).

Physical Description: These units consist of two rectangular tanks that are constructed of steel and measure approximately 4 feet tall, 5 feet long, and 5 feet wide. These units are situated in a 6 inch steel pan over concrete. According to the facility representative, these are the only used oil dempster tanks that are still in use at the facility. The dempster tanks were SWMUs that were identified in the PA/VSI report dated May 6, 1987.

These units manage oil generated in the skin mill, also known as the temper mill. In the temper mill, the steel coils, which are not steel strips, are reduced by one to two percent in order to improve the surface texture and the forming qualities of the steel. This process generates oil which is first conveyed to one of the Cold Mill Sumps (SWMU CRM 10) and then pumped to these units. From these units, the used oil is removed offsite by a contractor.

Wastes Managed: These units store used oil from the temper mill.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU CRM 10 - Cold Mill Sumps

Photograph No(s).: R4P1 and R6P5. R4P1 was not developed.

Period of Operation: The date these units began operating is unknown. However, the available file material indicates that these units could have began operation in 1935, or the 1960s when the Cold Rolling Mill was modified, until the present.

Location: These units are located throughout the Cold Rolling Mill, which is located in the northern portion of the facility.

Physical Description: These units are constructed of concrete and covered with steel grates. These units have varying capacities.

These units collect rinse waters and oily wastes generated throughout the Cold Rolling Mill. According to the facility representative, these units were built whenever a piece of equipment was added to the Cold Rolling Mill. The oily wastes generated at the tandem mills flow to these units and are then pumped to the Z-46 (Z-47) Waste Oil Tanks (SWMU CRM 9). The contents of other sumps are pumped into a tanker truck and disposed offsite.

Wastes Managed: These units collect rinse waters and oily wastes.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU MIS 1- Asbestos Storage Area

Photograph No(s).: R2P6 and R2P7

Period of Operation: The date of operation for this unit is unknown until the present.

Location: This unit is located in the northern portion of the facility on the east side of the Rouge Operations Warehouse, west of the Blast Furnace Wastewater Treatment Plant (SWMU BF 1).

Physical Description: This unit consisted of a concrete floor on the east side of the Rouge Operations Warehouse. The dimensions of this unit could not determined at the time of the VSI or from the available file material. Currently, this unit consist of a blue, steel storage bin situated over concrete. This storage bin measures approximately 5 feet long, 10 feet wide, and 6 feet tall. At the time of the VSI, the purpose of this bin was unknown, but it was identified as a contractors box. A green storage bin is located immediately south of this unit, and it measures approximately 5 feet long, 2 feet wide, and 4 feet tall. At the time of the VSI, this bin was being used to store a bag of insulation.

Wastes Managed: This unit stored asbestos waste that was taken offsite for disposal.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU MIS 2 - <90 Day Hazardous /Non-hazardous Waste Area

Photograph No(s).: R2P9 thru R2P12

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1965, when the Open Hearth Furnaces were removed, until the present.

Location: This unit is located in the western portion of the facility at the Open Hearth Balcony 10, north of the Hi-Lo Waste Oil Tank (SWMU MIS 3).

Physical Description: This unit is constructed of concrete and measures approximately 30 feet long and 10 feet wide. This unit is covered by a roof and is surrounded by a fence. A concrete ramp leads to the opening of this unit, and a concrete berm contains any spills that might occur at this unit.

This unit is divided into three compartments that store pallets, hazardous waste, and raw materials. The pallets are stored on the ground in the southern end of this unit. These pallets are removed by a contractor for disposal offsite. The middle portion of the unit is used to store hazardous wastes generated throughout the facility. At the time of the VSI, miscellaneous hazardous wastes, used oil, and waste grease were being stored here. According to the 1996 Contingency Plan, the miscellaneous hazardous wastes stored are non-halogenated solvents that are used in the J-9 paint shop. These halogenated solvents include spent xylene (F003) and toluene (F005). Non-halogenated solvents used in the J-9 shop that are spilled are cleaned up and pumped into drums and labeled as hazardous wastes. These drums are then transported to this unit and stored until they are shipped offsite and landfilled. The waste oil is pumped out offsite. The western end of this unit is used to store raw materials.

According to the May 6, 1987 PA/VSI report, this unit also managed spent 1,1,1-trichloroethane (F001). According to the 1986 Contingency Plan located in the November information response, 1,1,1-trichloroethane was used at the Power House maintenance area in cleaning solvents for small parts and electrical equipment. If any spills or leaks occurred during cleaning, the liquid was pumped into drums and stored at this unit. All of the wastes stored at this unit are removed offsite by a licensed vendor.

Wastes Managed: This unit manages wooden pallets, xylene (F005), toluene (F003), other D001 wastes, used oil, waste grease, D001 wastes, and other hazardous wastes that were not identified during the VSI or in the available file material.

History of Releases: There were no reported or observed releases at the time of the VSI.

SWMU MIS 2 - <90 Day Hazardous /Non-hazardous Waste Area (Continued)

Potential for Past/present Release:	**High**	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU MIS 3 - Hi-Lo Waste Oil Tank

Photograph No(s).: R4P16, R4P17, R4P18, and R4P19

Period of Operation: This unit has operated from an unknown date until the present.

Location: This unit is located in the portion of the facility on the west side of the Hi-Lo shop, south of the <90 Day Hazardous/Non-hazardous Waste Area (SWMU MIS 2).

Physical Description: This unit is constructed of steel and has a capacity of approximately 15, 000 gallons. The exact capacity of this unit was not known at the time of the VSI . This unit is situated horizontally on cradle mounts over concrete. This unit is surrounded on three sides by a cinder block containment wall that measures approximately 3 feet high.

This unit is used to store waste oil generated from vehicle maintenance. The oil from this unit is pumped out by a licensed vendor and disposed offsite. At the time of the VSI, a pile of floor sweepings from the Hi-Lo Shop was located adjacent to the southwest corner of the containment wall. The floor sweepings are removed from this area with a front end loader that transports these wastes to a waste box so that they can be disposed of in a type two landfill.

Wastes Managed: This unit manages used oil that is not hazardous, but it might contain hazardous constituents. Floor sweepings are also managed adjacent to this unit, but they are not hazardous.

History of Releases: At the time of the VSI, heavy oil staining was observed on the west side of the containment wall. During the VSI, it appeared that the used oil from this unit was allowed to drain into a square steel box located on the west side of the containment wall. Consequently, the oil from the box appeared to have spilled down the west side of the wall and onto the ground. Also, cracks were observed on the west and south sides of the wall. Oily water was observed on the ground beside the southern wall.

Potential for Past/present Release:		
	High	**(X)**
	Moderate	**( )**
	Low	**( )**

Conclusions: Further action is warranted based on the questionable integrity of the containment wall and the observed releases at the VSI. Confirmatory sampling is recommended to determine the possible extent of soil contamination at this unit.

SWMU MIS 4 - PCB Storage Building

Photograph No(s).: R5P6

Period of Operation: This unit operated from an unknown start date until 1997. According to the PA/VSI report dated May 6, 1987, this unit began operation in 1980.

Location: This unit is located in the western portion of the facility on the western end of the Continuous Caster Plant. This unit is also located northwest of the <90 Day Hazardous/Non-hazardous Waste Area (SWMU MIS 2).

Physical Description: This unit is a building constructed of corrugated steel and measures approximately 150 feet wide and 150 long. This building has of concrete, epoxy sealed floors with 8 inch high containment curbing.

According to the previous PA/VSI report, there were two PCB storage areas. Area No. 1 had a capacity of 30,000 gallons, and it was located in the vicinity of the Powerhouse. This area was used from 1980 until 1982, when it was closed and decontaminated. This area was used to store drums of PCB waste until the waste was removed by a licensed vendor and incinerated.

In the previous PA/VSI report, this building is referred to as Area No. 2. According to that report, this unit was used to store PCB-filled transformers and rectifiers from 1980 until 1982. The liquid from these units was drained onsite into drums and then incinerated. From 1982 until 1997, this area was used to temporarily store used transformers and samples taken for dielectric strength and moisture. According to the facility representative, this area was also used to store PCB filled drums and debris. Again, this material was removed offsite by a licensed vendor and incinerated. Currently, this area is used by Ford HV (high voltage) Operators.

Wastes Managed: This unit managed PCB filled drums and debris, used transformers, and samples taken for dielectric strength and moisture.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU MIS 5 - Sewer Lines

Photograph No(s).: A photograph could not be taken of this unit because it is underground.

Period of Operation: These units have been operating from an unknown start date to the present.

Location: These units are located throughout the facility.

Physical Description: These units are 96 inches in diameter, but the material of construction is not known.

These units transport blowdown from the cooling towers of the Blast Furnace Wastewater Treatment Plant (SWMU BF 1), Vacuum Degasser Recycling System (SWMU LRF 1), and Continuous Caster Recycle System (SWMU CCS 2) to the Rouge River. The blowdown from the Continuous Caster Recycle System and the Vacuum Degasser Recycling System is first transported to the 12 A Lagoon (SWMU CCS 1). Process wastewater is transported through these units from the North and South Neutralization Areas (SWMU CRM 2) and the North and South Hot Strip Mill Scale Pits (SWMU HSM 1) to the SRWWTP and ultimately to the Rouge River. Non-contact cooling water and contact cooling water respectively generated in the Blast Furnaces B and C and the tandem mills in the Cold Rolling Mill are also transported through these units to the Rouge River. This unit also manages wastewater generated at the Ladle Dumping Operation Pit (SWMU BOF 2).

In the past, this unit transported process wastewater from the Former Slab Mill Scale Pit (SWMU FSM 1) and the Former Scarfer Grit Scale Pit (SWMU FSM 3) to the SRWWTP and ultimately to the Rouge River. The wastewater from the Coke Oven Biological Wastewater Treatment Plant (SWMU CP 8) flows through this unit to the sanitary sewer system.

Wastes Managed: These units manage blowdown, non-contact cooling water, contacting cooling water, and treated process wastewater generated throughout the facility.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: No further action is warranted based on no release history or evidence of release.

SWMU MIS 6 - Methylene Chloride Drums- Oxygen Plant

Photograph No(s).: R5P7A

Period of Operation: The date this unit began operating is unknown. However, the available file material indicates that this unit could have began operation in 1962, when the Oxygen Plant began operation, until 1996, when the Oxygen Plant was shut down.

Location: This unit is located in the western portion of the facility on the west side of the Oxygen Plant, which is east of the Hot Strip Mill.

Physical Description: This unit consists of a 55-gallon drum situated horizontally in a steel frame over a steel drip pan that is approximately 2 feet wide. This unit was housed under a metal roof and is situated on a concrete slab that is approximately 4 feet above grade with no curbing. At the time of the VSI, the area where this unit was located was fenced off, and therefore, this unit was not accessible.

According to the 1996 Contingency Plan, methylene chloride and tetrachloroethylene were used in the Oxygen Plant in a dip degreaser for parts cleaning. As the solvent became laden with oily sludge, the degreaser was cleaned out. The spent solvent (F001) and any solvent that leaked or spilled was pumped into this unit and labeled as hazardous waste. If any solvent was spilled and absorbent was used, the absorbent was also disposed of in this unit as a hazardous waste. The material contained in this unit was stabilized and then landfilled.

Wastes Managed: This unit managed spent methylene chloride and tetrachloroethylene (F001).

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU MIS 7 - Used Oil Dempsters

Photograph No(s).: R2P8

Period of Operation: The period of operation for these units is unknown. Presently, the only dempsters tanks that are in operation are the Z-46 (Z-47) Waste Oil Tanks (SWMU CRM 9).

Location: According to the previous PA/VSI report, these units were located at A-39 adjacent to the Shipping Building, J-9 Shop, Hi-Lo Repair Shop, Stabilizing Mill, and at the North and South Hot Strip Mill Scale Pits (SWMU HSM 1). The Z-46 (Z-47) Waste Oil Tanks (SWMU CRM 9) in the Cold Rolling Mill were identified as used oil dempster tanks during the VSI.

Physical Description: According to the previous PA/VSI report, these units consisted of open dempster containers and tanks that were used to store used oil that consisted of general tramp oil generated from bearing leakage, rustproofing oil run-off, crankcase oils, etc. The waste from these units were pumped out daily by licensed vendors for disposal offsite. The dempster containers are no longer present at the facility, but the Z-46 (Z-47) Waste Oil Tanks are representative of how the dempster tanks looked. Based on the construction of the Z-46 (Z-47) Waste Oil Tanks, the dempster tanks were rectangular tanks constructed of steel. These measured approximately 4 feet tall, 5 feet long, and 5 feet wide and were situated in a 6 inch steel pan.

Wastes Managed: These units managed non-hazardous used oil that could have contained hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: Although minimal patches of oil stains were observed at A-39, no further action is warranted based on the materials of construction and no reported or observed releases.

SWMU MIS 8 - Spent Mold Foundry Sand Pile

Photograph No(s).: R2P26, R3P1

Period of Operation: According to the previous PA/VSI report, this unit operated from 1962 until 1985.

Location: This unit was located in the northern portion of the facility in the Ingot Mold Foundry, north of the Blast Furnaces.

Physical Description: According to the previous PA/VSI report, this unit measured approximately 40 inches long and 60 inches wide. This unit was situated on the ground.

This unit was used to store spent mold foundry sand generated from making iron ingots. The sand molds were constructed of sawdust, clay and molasses. The sand molds were hollow and the interior of the mold consisted of sand. The molten iron from the Blast Furnaces was poured into the sand molds and allowed to solidify. The resulting iron molds were then used to cast steel ingots from the molten steel produced in the Blast Oxygen Furnaces. After the iron solidified, it was removed from the mold and taken to EE building for cleaning. Next, the cheek, sand holder, was removed from the sand mold and the sand was poured into this unit. The sand was screened and recycled, but the sand that could not be reused was landfilled.

Wastes Managed: This unit stored non-hazardous spent mold foundry sand that may have contained hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the non-hazardous characteristics of the waste and no release history or evidence of release.

SWMU MIS 9 - Parts Cleaners

Photograph No(s).: R4P9

Period of Operation: These units have been operating from an unknown start date until the present.

Location: These units are located throughout the facility. According to the 1996 Contingency Plan, these units are located in the maintenance areas the Blast Furnace building, the BOF building, Continuous Caster Plant, Cold Rolling Mill, and the Hot Strip Mill.

Physical Description: Based on the parts cleaner observed at the tandem mill inside the Cold Rolling Mill during the VSI, these units are constructed of steel and measure approximately 2.5 feet tall, 1.5 feet wide, and 3 feet long. The file material indicated that these units are situated over 55-gallon drums, but the parts cleaner in the Cold Rolling Mill was not. The parts cleaner in the Cold Rolling Mill has a capacity of approximately 25 gallons.

These units are used to contain spent petroleum naphtha (mineral spirits) (D001) generated in the maintenance areas throughout the facility. According to the 1996 Contingency Plan, mineral spirits are used as a degreasing fluid, paint brush cleaner, and all-around oily parts cleaner. Usually, Safety Kleen pumps the spent mineral spirits (D001) from these units into a holding drum and transports them offsite for reclamation. If this does not take place, the material is taken to the <90 Day Hazardous/Non-hazardous Waste Area (SWMU MIS 2) from which it is transported offsite for disposal.

Wastes Managed: These units manage spent mineral spirits (D001). This waste is clear green and it has a hydrocarbon odor.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**( )**
	Low	**(X)**

Conclusions: No further action is warranted based on the materials of construction and secondary containment and no release history or evidence of release.

SWMU MIS 10 - New Debris Pile

Photograph No(s).: R1P22

Period of Operation: This unit has been in operation from 1997 until the present.

Location: This unit is located in the southeastern portion of the facility, just northwest of the Coke Oven Gas Holder Tank.

Physical Description: This unit consists of 1500 ft^3 BOF refractory brick and miscellaneous dirt. This unit is situated on the ground with no secondary containment.

This unit manages refractory brick generated from the refractory lances in the Basic Oxygen Furnaces, desulfurization dust from the Desulfurization (D/S) Hoppers (SWMU BOF 3), flacked graphite particles and iron oxides from the Kish Hoppers (SWMU BOF 5), and ladle refining dust from the Ladle Refining Facility No. 1 and the Vacuum Degasser System Baghouse (SWMU LRF 2) and the Ladle Refining Facility No. 2 Baghouse (SWMU LRF 3). This unit also manages the filter cake from the Filter Cake Area (SWMU LRF 1d) located at the Vacuum Degasser System (SWMU LRF 1). The wastes managed at this unit are transported offsite and disposed of in a landfill.

Wastes Managed: This unit manages refractory brick and various non-hazardous waste dusts and filter cake material that contain negligible amounts of hazardous constituents.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:

High	**( )**
Moderate	**( )**
Low	**(X)**

Conclusions: No further action is warranted based on the non-hazardous characteristics of the waste and no release history or evidence of release.

SWMU MIS 11- WOF Stockpiled Material

Photograph No(s).: R1P1, R1P12, R1P13, R1P20, R1P21, R6P11, R6P16, R6P17, R6P18, Ford R3P23, and Ford R3P24

Period of Operation: This unit has been in operation from 1998 until the present.

Location: This material is located throughout the facility. The flue dust and ore fines are stockpiled at the Coke Plant and By Products Area (AOC D) adjacent to the South Quench Station (SWMU CP 1) and the coke oven gas holder tank in the southeastern portion of the facility. The coke breeze is stockpiled adjacent to the Coke Oven Tar Sludge Decanter Box (SWMU CP 3) and along the surrounding fence at Rouge.

Physical Description: This unit is composed of mounds of flue dust from the Flue Dust Catcher (SWMU BF 3) and iron ore fines and coke breeze from the raw materials for the Blast Furnaces. This material is situated on the ground. This material is being stockpiled for use in the Waste Oxide Facilities, which is not on line. According to the facility representative, the flue dust, ore fines, coke breeze, and scale from the Slab Mill Scale Piles (SWMU FSM 2) will be placed in the Waste Oxide Facilities and converted to briquets that will be used in the Basic Oxygen Furnaces. When the Waste Oxides Facility is brought online, the flue dust will remain at the facility for three to four months before it is used. The iron ore fines will be stored for nine months, and the scale and coke breeze will remain for over a year.

Wastes Managed: This unit stores iron ore fines, coke breeze, and flue dust.

History of Releases: There were no reported or observed releases at the time of the VSI.

Potential for Past/present Release:		
	High	**( )**
	Moderate	**(X)**
	Low	**( )**

Conclusions: No further action is warranted based on the non-hazardous characteristics of the material, however, the present release potential is moderate because this materials is being stored in large volumes on the ground outside. This material can easily become air borne.

IV. AREAS OF CONCERN

This section presents descriptions of the Areas of Concern (AOCs) identified during the PA and VSI at the Rouge Steel facility. Photograph numbers correspond to those presented in the Photograph Log in Appendix A.

AOC A - Oil Release Adjacent to J-9 Shop

Photograph No(s): R4P12, R4P13, R4P14

Description: During the VSI, oil was observed on the ground adjacent to a transformer, which is located adjacent to the J-9 Shop at the Cold Rolling Mill in the northern portion of the facility. Oily water appeared to be coming from the base of the transformer and spilling outside of the area where the transformer is located.

A two gallon milk jug that contained oil and oily rags was also observed in this area. It was speculated during the VSI, that the oil release could have been a result of vehicle maintenance operations, but this was not confirmed.

Conclusions: Further action is warranted based on the observed release during the VSI. The oil release appeared to be continuous, therefore, it is recommended that the facility conduct sampling in this area to investigate the extent of the impact of the oil on the environment.

AOC B- Oil Release North Side of Hi-Lo Shop

Photograph No(s): R5P5

Description: Heavy oil staining was observed on and around a concrete area in the Bolster Layout Area, located on the North side of the Hi-Lo Shop and west of the Open Hearth Balcony, that measured approximately 60 feet long and 60 feet wide. This area was covered with muddy oil that was not completely contained on the pavement. Some of the oil had spilled onto the surrounding ground. It appeared that the oil releases in this area were routine

Conclusions: Further action is warranted in this area based on the lack of secondary containment and the appearance of routine oil releases. It is recommended that confirmatory sampling be performed in this area to determine the extent of contamination.

AOC C- Electric Arc Furnace

Photograph No(s): R5P3 and R5P21

Description: The Electric Arc Furnace is located in the southern portion of the facility adjacent to the 12A Lagoon (SWMU CCS 1). According to the Notification of Hazardous Waste attached to a letter dated January 6, 1986, the eastern portion of this building is located where the Former Tar Sludge Landfill was located. At the time of the VSI and in the available file material, it was not shown if the landfill had been properly closed prior to the construction of the unit. The Former Tar Sludge Landfill (SWMU EAF 1) stored tar sludge (K087) generated from extracting tar from the coke gas.

During the VSI, the inside of this building was toured and the floor of the building was covered with EAF dust (K061). The electric arc furnaces have not been used since 1992, but this building is currently being used for ladle car repairs.

Conclusions: Further action is warranted based on the historical use of the land at this building. Confirmatory sampling is recommended in order to determine if the soil beneath this building has been impacted from tar sludge (K087). Also, based on the dusty floor inside the building, the soil immediately surrounding the building should be sampled for the presence of EAF dust.

AOC D - Coke Plant and By-Products Area

Photograph No(s): R1P5, R1P3, R1P2 and R6P9

Description: This area is located in the southeastern portion of the facility. Currently, this area has been designated a Registered National Historic Landmark and will be updated as part of Ford's Heritage 2000 Project. As part of the project, a redevelopment of this area will include decommissioning of all structures, demolition of some structures, restoration of remaining structures, investigation and, if necessary, appropriate environmental remediation.

During the VSI, this area was extremely over grown and it was difficult to determine if any releases had occurred in this area. This area was covered with dust, but it could not be determined if the dust was hazardous. Dried tar was observed adjacent to the Coke Oven Tar Sludge Decanter Box (SWMU CP 3). It could not be determined if this was tar sludge or tar pitch. The available file material indicates that during a RCRA inspection conducted on March 14, 1986, tar pitch spillage was observed in the vicinity of this unit. According to the inspection report, approximately five gallons of tar pitch was observed in the front of this unit. Rouge Steel later explained that the tar pitch is a product, not tar decanter sludge (K087). According to Rouge, it was normal to dispose of any tar pitch spillage with the tar decanter sludge. As a response to the spillage, a new steel plate was welded onto this unit to prevent further spillage.

Conclusions: Further action is warranted based on reported and observed releases in this area. It is recommended that a RFI be performed in this area as part of the work being done Ford's Heritage 2000 Project.

AOC E - Sluice Pits

Photograph No(s): R5P4

Description: These units were located in the southern portion of the facility, south of the Basic Oxygen Furnace Building. It could not be determined from the VSI or the available file material what these units were used for. These units can be found on the site plan for Corrective Action Consent Order Phases-Rouge Manufacturing Complex dated May 30, 2000. On the site plan, these unit are located adjacent to the Booster Building.

Conclusions: Since the function of these units is not known, it is recommended that the facility research the use of these units and determine their potential to release to the environment.

AOC F -BOF UST

Photograph No(s): None

Description: According to a release report completed by Rouge Steel on December 1, 1999, elevated PID readings were detected from a 1,000 gallon diesel UST near the BOF on November 30, 1999 during tank removal activities. It could not be determined from the available file material if any sampling was conducted in this area to determine the extent of contamination. The tank was last used on August 23, 1999, and during closure, the tank was filled in with concrete and a building is located over the tank.

Conclusions: Further action is warranted based on the reported release at the BOF. It is recommended that the facility locate the closure report for this unit to verify that sampling was conducted at the time of closure. If sampling was not conducted at the time of closure, the facility should sample the soils in this area to determine if all of the contaminated soil was excavated.

V. CONCLUSIONS

Based on information obtained during the PA/VSI, further investigations under Corrective Action Authorities appear to be warranted for some of the SWMUs whose release potential is high and all AOCs. The facility should perform confirmatory sampling on the following SWMUs whose release potential is high and the following AOCs:

- Coke Oven Tar Sludge Decanter Box (SWMU CP 3);
- Waste Material Accumulation Pile (SWMU BF 4);
- PCB-Contaminated Oil UST (SWMU CRM 1);
- North and South HSM Scale Pits (SWMUs HSM 1b and 1c);
- Hi-Lo Waste Oil Tank (SWMU MIS 3);
- Oil Release Adjacent to J-9 Shop (AOC A);
- Oil Release North Side of Hi-Lo Shop (AOC B);and
- Electric Arc Furnace (AOC C).

Other units whose release potential is high are the North and South Quench Stations (SWMU CP 1) and the Former Tar Sludge Landfill (SWMU EAF 1). It is recommended that the facility determine the location of the quenching that occurred outside the North and South Quench Stations. Also, the facility should consult with EPA on any further action that should be taken to investigate possible soil contamination at the quench stations and the Former Tar Sludge Landfill.

Three of the AOCs simply require more investigation. It is recommended that a RCRA Facility Investigation (RFI) be performed at the Coke Pant and By Products Area AOC D) as part of the Heritage 2000 Project. Also, the facility need to find out if any wastes were managed by the Sluice Pits (AOC E). The facility should located the closure report for the BOF UST (AOC F) to see if sampling was conducted at the time of closure. If sampling was not conducted or if the sampling results can not be found, then the facility should conduct soil sampling at the BOF UST.

There are two units whose release potentials were moderate that require more investigation. It is recommended that any unpaved areas in the vicinity of the Course and Fine Dust Silo (SWMU BOF 4) be examined. Also, during the next sampling event at the 12A Lagoon (SWMU CCS1), the soil at the bottom of this unit should be sampled also.

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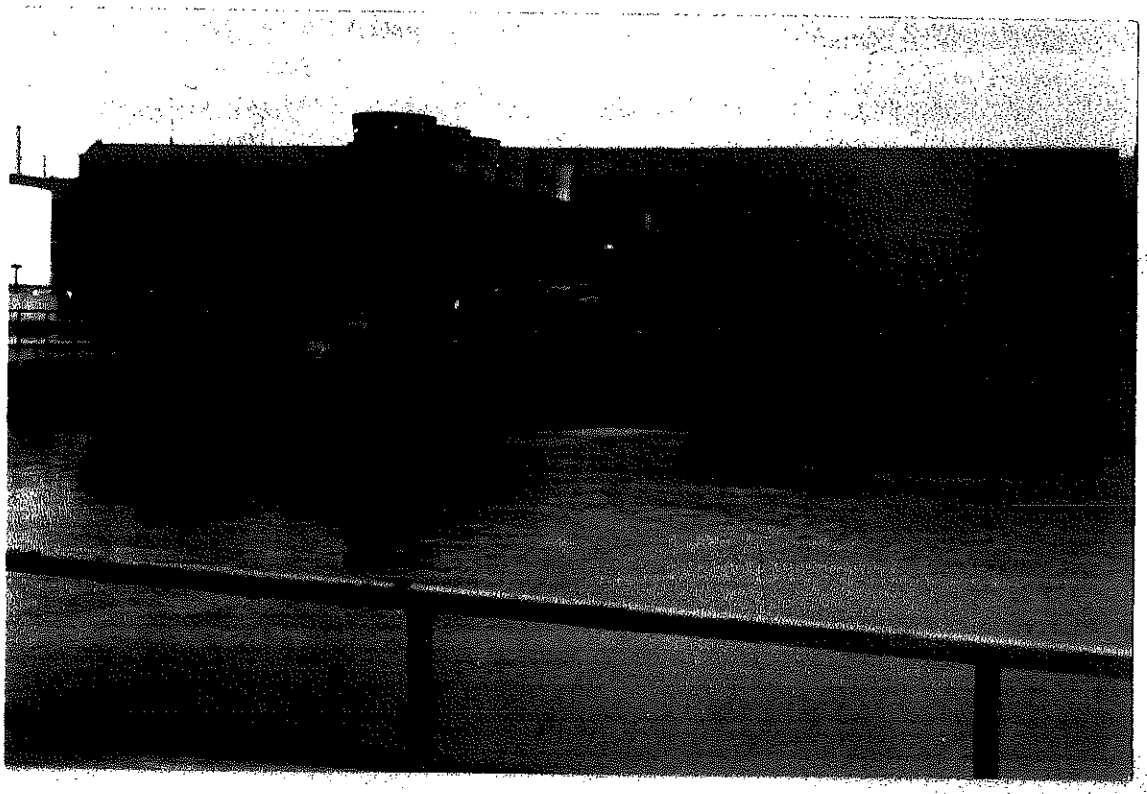
APPENDIX A
VISUAL SITE INSPECTION PHOTOGRAPH LOG



Photograph No.: R6P2
Date: 6/2/00

Time: 1156
Direction: SE

Description: View of the spill way from the Rouge Outfall in the left portion of the photograph where the yellow railing is located, looking southeast. Note SWMU BF 1h, Cooling Towers and SWMU BF 4, Waste Material Accumulation Pile in the upper left portion of the photograph.

Photograph No.: R6P1
Date: 6/2/00

Time: 1155
Direction: E

Description: View of the outfall for the Basic Oxygen Furnaces.

Date: March 30, 1999

Subject: Corrective Action Site Visit

From: Christopher Black, Geologist
Corrective Action Section
RCRA Enforcement and Compliance Assurance Branch

To: Official File, Rouge Steel Company - MID 087 738 431

Enclosed are field notes from a Corrective Action Site Visit on October 28, 1999 by Christopher J. Black of U.S. EPA RCRA Corrective Action Section to Rouge Steel, Dearborn Michigan. The visit to Rouge Steel was not an inspection, but a visit to assess the current state of the site and the possibilities for a Corrective Action Order to address the environmental problems at the site.

Thurs. 10/28/99

Rougesteel Corrective Action Visit

* Dan Windeler - Mgr. Env. Engr.
2 yrs 8 mo. ago
Here since June '97

* Karen Boryl - C.H.M.M.
- Here 2 months

- Rouge Steel -
became indp., in 1989 (Dec.)

- MDNR - at Coke Plant in late 80's
lead at plant

- Not (D.W.) aware of releases at EAF
wasn't here.

- PAD Storage cleanup - Coke Oven
Decantor Sludge

= Levy E.C.
outside contractor
Lease Land from Rouge Steel
Process Slag (Aggregate Manuf.)

- 2 Areas where they process slags
Iron Making Slag & Steel Making Slag

- Levy conveys it across the River to plant.

- Talked about Possible LF

- Power House co-owned by Ford & Rouge
  - Feb '99 Power House Explosion Very Large Explosion

  (Nat. Gas Explosion)

- Discussed New Order

- Revitalization of Rouge

  RAP? plans for demolishing Coke Plant (Rule 201 RAP)
  - MDEQ -

- Historical Site
  Coke Oven Gas Holder as overlook

- Jim Sygo

- Rap prepared by CRA

Brake for Lunch at 11:00 AM

= Went to Yard at 11:30 AM

= • Coke Oven By-Products Area
  XX Building
  (Ammonia Stills)

• 1st Large Bldg. W. of Miller Rd.

• Tar Decanter sludge Hopper (K087)

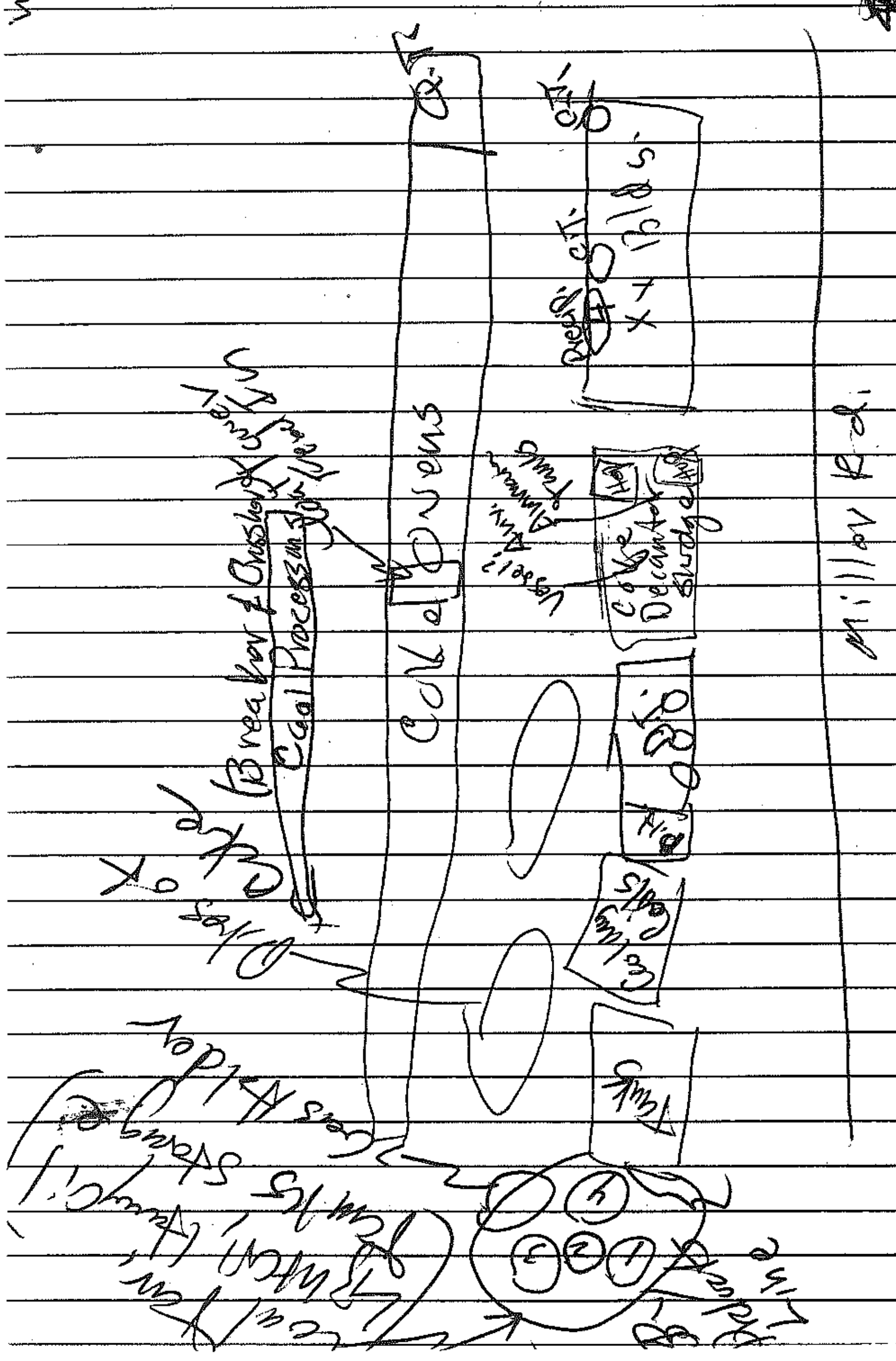
• Appears to be 2 Hoppers 1 West and One East

(• Rail w/ 3 Pushers to push out coke from ovens

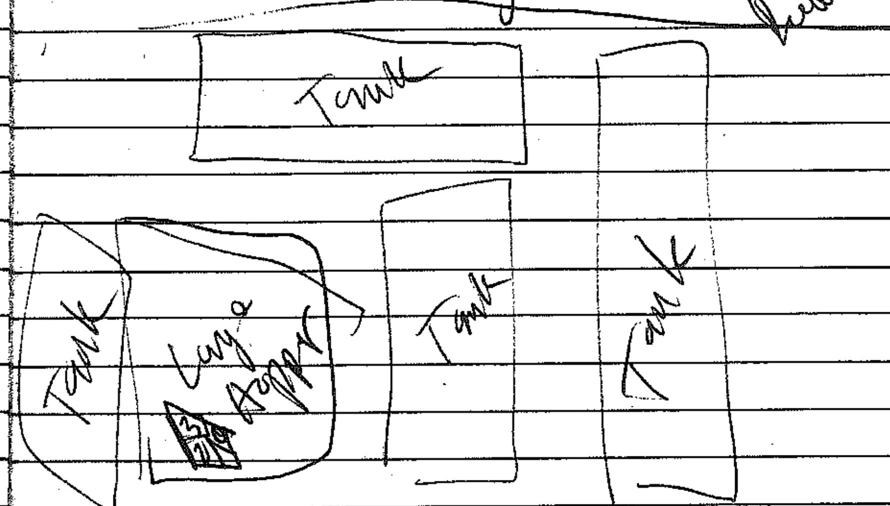
→ 4 Batteries (Sections w/ 20-30 ovens per battery))

• Condensate Tanks from Am. Stills on W. side of Bldg.

- 2 Cond. Tanks w/ 2ndary Contn. on W side of the Bldg.



- Never Quench Tower
  w/ Holding Water Pits + Pump
  Quench Coke
- Looked into Pump Room
- Observed Cooling Coils
- Looked at 3 Large Tanks



- cat walked labeled Haz. Waste
- Napthalene as product says
  Dan Windeler

- 6 -

- Add'l 2 Tanks on Southend of By-Products Line
- Observed Holding Tanks

=

Observed BOF Waste Dust

=

Observed Haz Waste Storage Area
— No obvious Leaks or spills

=

Electric Arc Furnace

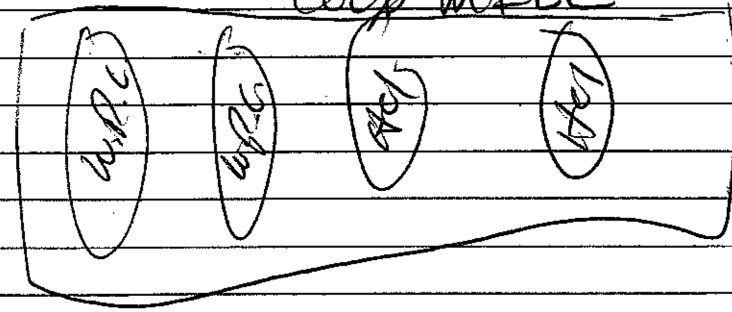
- Saw Baghouse + Hopper
- Observed a lot of dust in EA bldg.

Tour of EAF (Seems Dusty)

- 7 -

- 12 A Lagoon → for Surface Water Runoff
  ↳ Non-Contact Cooling Water

= Waste Pickle Liquor (K061)
Cell in FLL



- Limestone Rock Underlayment to Depth ~8'

= Hot Mill
Step — Scale Pit
waste of mill
Was registered as SWMU
(Scale from Slabs) pure Fe Ox
2 scale pits - roughing Mill
Finish Mill

- Purge sell as product
  ↳ talk to P... DRI facilities

RougeSteel

2:30 Met again w/ Don Windeler
and Karen Geary
to discuss trip to Mill

- DEQ Rep may address our RCRA concerns
- FAF → 5/10 dual drop-off
- BOF dust catching ground

ROUGE STEEL COMPANY

3001 Miller Road
P. O. Box 1699
Dearborn, Michigan 48121-1699

May 22, 1987

Mr. James Roberts
Hazardous Waste Division
Michigan Department of Natural Resources
PO Box 30038
Lansing, Michigan 48909

Dear Mr. Roberts:

Subject: Site Visit, Rouge Steel Company, May 6, 1987

During your and Mr. Slayton's visit to our manufacturing site you asked to be allowed to take photographs of the area where the coal tar decanter sludge was held pending its shipment for disposal. We have developed those photographs and are forwarding the negatives and one set of prints to you with this letter.

During your visit you also requested information concerning the location of the area at issue within a limited part of the Wilputte Foundation area. We have attached construction photographs, a drawing and a material storage sketch showing that the area was primarily for production material storage, and an analysis of the coal tar sludge. Only a small area was used for holding tar sludge. The production material stored on this site was, and occasionally still is, high volatile and low volatile coal for coke production and steam coal for the Number 1 Power House boilers. A description of each photograph and drawing follows:

1) Looking southeast across the By Products Building (April 17, 1986):

This photograph shows the two deepwell enclosures and the yellow barriers errected to protect them. The area at issue (shown as a red square) is surrounded by, clockwise from the deepwell enclosures: deepwell protective barrier, coal storage pile, construction trailers, and construction materials and parking area.

from coal tar decanter sludge constituents, which also may have been in the area. Thus, we conclude that it would be appropriate to clean up the area to approximately what would have been expected from pre-existing coal storage activities. That is what our Verification of Clean Up proposal attempts to demonstrate.

Very truly yours,

G. Doroshewitz

G. Doroshewitz, Manager
Environmental Engineering

Attachments: 6

cc: L. Lodisio (without attachments)
D. Slayton (without attachments)

DEPARTMENT OF NATURAL RESOURCES
HAZARDOUS WASTE DIVISION
FIELD REPORT

☐ Complaint Inspection
☐ Compliance Inspection
☐ PEAS Investigation
☐ PCB Report/Complaint

☐ Act 64 _____
☐ Act 136 _____
☐ Act 245 _____
☐ RCRA _____

Date HISTORY	Time
Company/Facility ROUGE STEEL	Facility No. MID 087738431
3001 MILLER RD City DEARBORN	Staff FIELDS

REMARKS: FILE SUMMARY

8/11/80 Company filed an EPA Notification Form for GENERATOR / TSD & UNDERGND INJECTION

11/12/80 Company filed a Part A only for the injection well.

9/10/81 MDNR letter returning 197 manifests because they had not been appropriately signed. Company was advised to contact Lansing MDNR if they had any questions regarding manifest procedures.

Jan/82 Waste Characterization Reports were filed for:
K013 Asbestos pipe insulation - Power & Utility
K013 Asbestos gasket material - Plant & Equipment
D003 Coke Oven Drip water - Iron Making Op.
D003 Final Cooler Waters - Iron Making Op
K087 Decanter Tank Tar Sludge - Iron Making Op
D003 Light Oil Muck - Iron Making Op
D001 (also F003) Light Oil Tank Sludge - Iron Making Op
K061 Electric Furnace Dust - Melting Op

2/19/82 MDNR Notice of Violation - The facility was illegally disposing of hazardous waste leachate from the Ore Yard Landfill.

Distribution: Original — District File
1st Copy — Lansing
2nd Copy — Other

R-5114

8/5/82 — Notice from Rouge Steel that effective Jan 1, 1982, the Ford Motor Steel Div became the Rouge Steel Company.

9/20/82 — The site's first RCRA Inspection Participants - Doroshewitz, Porter of Ford, and Norton of MDNR. The inspector clearly thought that the only regulated areas on site were the injection wells. In fact, the inspector wrote that the generator inspection segment of the form was, "Not applicable - No Off-Site Disposal".

10/19/82 — MDNR letter to company regarding inspection results. No signs on the injection wells. Letter makes clear the only area under review were the wells. Company was sent a copy of the inspection report with the letter.

10/22/82 — Company letter states signs were posted. The company never advised the inspector that the report was in error or that any other wastes were generated.

11/12/82 — MDNR letter stating the injection wells were in compliance.

11/29/82 — MDNR letters regarding manifesting
1/26/83 — errors.

9/21/83 — 2nd RCRA Inspection
Participants Weber-Ford & Norton-DNR
This inspection was a repeat of the first. It addressed only the injection wells and noted again that the site was not a generator of hazardous waste which was totally incorrect yet was not corrected by the company.

10/19/83 — MDNR letter that the wells were in compliance.

10/8, 10/84 — 3rd RCRA Inspection
Participants Ford - Doroshewitz, & Porter MDNR - Fields & Rubenstein.
Partly by accidently observing waste hauler activity and partly from familiarity with the business, questions were asked that identified an extensive generation of wastes. The site was in serious non compliance in several areas.

10/15/84 — MDNR letter to company summarizing the inspection.

11/15/84 — Company letter and several attachments in response.

3/29/85 — MDNR letter of warning to the company because they had not submitted a closure plan as requested.

4/15/85 — MDNR (DAMREL) notes in file summarizing a phone conversation with Ford's Tom Webber and EPA's Pat Vogtman. It was agreed that Rouge operated only an injection well and therefore was exempt from the closure plan requirement. A letter retracting the letter of warning was issued.

4/22/85 — EPA letter withdrawing letter of warning

5/21/85 — Reinspection (5/7/85) letter on the non compliance areas sited during October 84 RCRA Inspection. Some unfinished work, but tentatively considered in compliance.

7/2/85 — MDNR (DAMREL) letter withdrawing request for closure plan.

10/30/85 — Company letter with attached revised emergency plan. It had been improved significantly but still had some weak spots.

11/04/85 — Company letter to EPA for Interim Status Certification

3/14/86 — 4th RCRA Inspection, Discussed in attached papers.

RCRA Facility Assessment (RFA)

ROUGE STEEL
DEARBORN, MICHIGAN
MID 087 738 431

F.

~~B.~~ VISUAL SITE INSPECTION (VSI)

A. PURPOSE

The VSI will focus on identifying SWMUs and collecting visual evidence of releases at facilities to assist U.S. EPA in recommending further steps in the corrective action process. The major objectives of the VSI include:

1. Visually inspecting the entire facility for evidence that releases of hazardous waste or constituents have occurred and identifying additional areas of concern;

2. Ensuring that all SWMUs and areas of concern have been identified;

3. Fill in data gaps identified in the ~~PR; and~~ Preliminary File Review; and

4. Focusing recommendations concerning the need for a sampling visit, interim measures, a RCRA Facility Investigation (RFI), or no further action at a facility.

B. SCOPE

The VSI will include the entire RCRA facility and can extend beyond the facility boundary, if necessary. The VSI will focus on inspecting discernable SWMUs and will generally be limited to collecting visual evidence (i.e., photographic documentation) of potential releases.

C. INSPECTION REPORT

The VSI began at approximately 8:15 a.m. on Tuesday, April 5, 1988. A pre-inspection meeting was held at Mr. Gerald Doroshewitz's office. Present for the meeting were Mr. Gerald Doroshewitz, Manager of Environmental Engineering for Rouge Steel; Mr. Bill Gaines, Rouge Steel; Mr. Stephen Landes, Rouge Steel; Mr. Chris Porter, Rouge Steel; and Wayde Hartwick, U.S. EPA.

I explained the purpose of the VSI and answered several questions concerning the extent and scope of the RCRA corrective action process. Rouge was concerned over the number of SWMUs I had identified and disagreed with breaking down its identified SWMUs into specific components (i.e., Rouge considered the entire waste water treatment plant to be one SWMU system and not a number of SWMUs). I explained that I needed to look at all components that make up the SWMU and that Rouge's classification might be different from U.S. EPA's.

The walkover inspection began at approximately 9:00 a.m. at Unit #20. The weather was clear with a temperature of about 60'F. This unit is an

active 10,000-gallon steel underground storage tank containing waste oils. Material is removed bimonthly by licensed vendors for reclamation. Next to Unit #20 is Unit #25 that was not previously identified by Rouge. Unit #25 is a <90-day drum storage area approximately 10' X 10' in size, with a concrete floor and a concrete block dike. The maximum capacity of the unit is 16 drums of waste 1,1,1, trichloroethane. Next to Unit #25 is an accumulation area of empty drums. These drums accumulate waste oils, are emptied into Unit #20, and the empty drums are stacked next to Unit #25 for reuse.

Unit #19 is an inactive PCB storage building located just north of Unit #25. This unit is located within the Powerhouse Maintenance Building. The storage area is approximately 60' X 60' with a 1' high concrete diked area. The unit operated from 1980-1982, with a maximum capacity of 30,000 gallons.

Unit #3 was a lime settling pit for the Pig Iron Foundry that operated from 1952 to 1981. The unit is a concrete pit about 30' X 10', with a concrete conduit about 8' long. Solids that accumulated in the pit were transported offsite for disposal. Waste water overflowed to the sanitary sewer.

Unit #2 is a ladle dumping pit for the Pig Iron Foundry that operated from 1952 to 1981. The "pit" was an earthen area inside the Pig Cast Building. The area is void of material and covered with a steel grating.

Unit #1 is a waste accumulation pile located at the northeast boat dock. The waste pile handles W.W.T.P. filtercake, kish, and desulfurizer dust on a <90-day basis. The waste pile is located within a concrete-lined pit area. The accumulated material is removed by truck to an off-site landfill twice each week.

Unit #23 is the blast furnace waste water treatment plant. The unit is located near the northeast boat dock and consists of two oxidation tanks, three deep bed filters, six clarifiers, a vacuum filter, and a solids thickener. The two large clarifiers are located on concrete pads. A release of unknown quantity occurred from clarifier #1. The vacuum filter is located inside a building. Material from the filter is transferred to the waste pile (Unit #1). Three deep bed filters (not two) treat the waste water and the backwash is diverted back to the solids thickener for further treatment.

When I asked to see the oxidation tanks, I was told that they handled process water and weren't applicable to a RCRA inspection. I explained that they were identified as part of the waste water treatment plant and therefore needed to be inspected. Reluctantly, Rouge representatives allowed me to look at the units. The oxidation tanks are inground concrete tanks that appear to be part of the building foundation. Additional information on the components of the blast furnace W.W.T.P. has been requested of Rouge.

Unit #22 is identified as the spent mold foundry sand area. Sand molds were discarded here after the steel ingot molten iron had solidified.

The sand accumulation and casting cleaning area was located on a dirt floor within the EE building. The area involved is approximately 40' X 60', with a maximum capacity of 60 cubic yards. No release evidence was observed here, however, the entire area was covered with blast furnace sand. The sand and refuse from casting cleaning was removed regularly for off-site disposal.

Unit #5 is the fly ash removal system, consisting of electrostatic precipitators, a pneumatic transfer system, and a storage silo. The electrostatic precipitators and the pneumatic transfer system are located on the roof of the powerhouse building. The brick storage silo is elevated approximately 15' aboveground to allow trucks to load the material. Water and a lime slurry are used to wet the fly ash to control dust during loading. Excess water presumably overflows into the sanitary sewer.

Unit #6 is the bottom ash removal system and consists of a traveling grate, a concrete pit, a pneumatic transfer system, and a storage silo. The storage silo is elevated about 15' aboveground to allow trucks to load the material. All other components are located within the powerhouse building. Each day the ash is loaded into covered trucks and transported off-site for disposal.

Unit #4 consists of two aboveground tanks with a combined capacity of 30,000 gallons that contain demineralizer effluent. Acid and caustic solutions are used to demineralize the powerhouse boilers. Spent wash solutions accumulate in the two tanks and are then discharged through a pH monitoring unit to a NPDES-permitted outfall. A lime slurry that is used during this regeneration process is stored in one of the tanks and sprayed on flash at Unit #5.

Unit #12 consists of 12 coke oven gas line dip water collection tanks dispersed throughout the facility. All tanks are inactive. All tanks are steel, have concrete secondary containment and range in capacity from just under 1,000 gallons to over 2,000 gallons. The tanks are numbered 12.01-12.12. Seven of the tanks are aboveground and five are underground. Specific information on each tank has been requested but has not been received. Every aboveground tank had oily accumulation and staining within the secondary containment. No evidence for release was observed outside the secondary containment. The tanks accumulated moisture condensation from the coke oven gas lines. Tanks were pumped out by a vendor and the waste was disposed of in coke oven recirculating quenching sumps where it was used to quench hot coke. All coke oven operations were ceased in 1981.

Unit #11 is the GG Building Coal Picking Refuse Waste Pile. Material accumulates as a result of hand picking of refuse from coal and consists of miscellaneous wood and rock fragments. The waste is passed through a hopper and accumulates as a pile on the ground.

Unit #13 is the former location of waste pile that accumulates from the coke oven doors. The pile was approximately 10 cubic yards in volume and set on bare ground. All waste was removed for off-site disposal in April

1987. The pile was located at the south end of the coke oven area near the SS Building.

Unit #18 is the coke oven biological treatment plant and consists of a 70,000-gallon equalization basin, a neutralization tank, 15 rotating biological contractors (RBCs), and a skimmed oil container. This unit was used to treat the AC still bottoms, the diammonium phosphate plant effluent and the waste water from the coke oven light oil plant. The plant was started in 1985 and closed in 1987. All components have secondary containment except the skimmed oil container. No evidence of release was observed.

Unit #15 is the former location of the AC still-bottoms holding lagoon. This unit was only in operation about 1 year in the Mid- 1950s. The lagoon only operated long enough to relocate the discharge into Detroit's sanitary sewer system. The lagoon was closed and backfilled. The lagoon was lined with brick, had dimensions of approximately 100' X 20' and a capacity of 50,000 gallons. Wastes were identified as AC still-bottoms. The lagoon was necessary to remove still-bottoms so they wouldn't be discharged to the powerhouse sewer.

Unit #16 consists of the two deep well injection wells. Well #1 was plugged and abandoned in 1984. Well #2 is permitted by U.I.C. but is currently inactive. Well #2 also has a pressure tank to keep the annulus pressure up to 130 pounds.

Unit #17 is composed of two steel coke oven light oil muck tanks. Both tanks are located within concrete secondary containment. Currently, the tanks are empty and inactive. The tanks contained a waste intermediate in density between coke oven light oil and water, and was described as polymerized adsorption oil that is "similar" to the listed K087 hazardous waste. Vacuum trucks would pump out the light oil. The remaining sludge was accumulated on a <90-day basis and disposed of as a hazardous waste.

Unit #14 is a concrete collection pit for coke oven tar decanter sludge. The pit contained K087 waste and was removed from the pit weekly after being stabilized with coke oven coke breeze. A production tank is next to the pit.

Unit #21 consists of several Dempster portable oil tanks of approximately 500-gallon capacity each. These tanks contain general waste oils and are pumped out daily by vendors for off-site disposal.

Unit #24 is composed of three pickle liquor <90-day storage tanks and two holding tanks, the secondary containment for the tanks is composed of limestone gravel. No evidence for release was observed.

Unit #7 is the Basic Oxygen Furnace (BOF) fine and coarse dust accumulation system. The unit consists of several components including a storage silo that accumulates both fine and coarse dust that is removed daily for off-site disposal.

Unit #8 is the Basic Oxygen Furnace (BOF) ladle dumping operation. This operation consists of a concrete pit inside the ladle dumping building, a

conveyance sluice, an outside concrete pit with steel piling sidewalls, and a waste pile. The first concrete pit was inside the ladle dumping building and was covered with a steel panel. A steel chute connects the first concrete pit to the outside concrete pit. The accumulated sludge is clammed-out biweekly using a crane and clamshell bucket onto the waste pile for de-watering. The material in the waste pile is removed 1 to 2 times per week for off-site disposal.

Unit #9 is the electric arc furnace (EAF) baghouse and storage silo. This unit is located in close proximity to the Rouge River. Three releases have been documented from this unit in July (2) and December of 1987.

Unit #10 is two Steel Coke Oven Gas holder Waste Tanks. One tank is utilized to demulsify oil that is recycled back to the gas holder piston while the other tank accumulates contaminated oil that is removed by an off-site vendor twice a week. The tanks have concrete secondary containment.

D. Photolog/Photographs.

1-1	Unit #20, 10,000 Gallon UST, lOOKING S.E.
1-2	Unit #20, 10,000 Gallon UST, Looking S.E
1-3	Unit #25, Drum Storage Area, Looking East
1-4	Unit #19, Old PCB Storage Area #1, Inside Building
1-5	Unit #19, Old PCB Storage Area #1, Inside Building
1-6	Unit #19, Old PCB Storage Area #1, Outside Building
1-7	Unit #3, Lime Settling Pit
1-8	Unit #2, Ladle Dumping Pit
1-9	Unit #1, Waste Pile, Looking North
1-11	Unit #23, Blast Furnace W.W.T.P. (Photos 1-11 to 1-17 Taken Sequentially, Looking North to South)
1-12	Unit #23
1-13	Unit #23
1-14	Unit #23
1-15	Unit #23
1-16	Unit #23

1-17	Unit #23
1-18	Inside Vacuum Filter Building
1-19	3 Deep Bed Filters
1-20-22	Oxidation Tanks, Looking East
2-1	Clarifier #1 In Blast Furnace WWTP, Where Release Occurred
2-2	Clarifier #1 In Blast Furnace WWTP, Where Release Occurred
2-3	Unit #22
2-4	Unit #5
2-5	Unit #6
2-6	Electrostatic Precipitators for Unit #5
2-7	Unit #4 Vertical Demineralizer Tanks
2-8	Unit #12.03 Coke Oven Drip Tanks, Looking West
2-9	Unit #12.01 Coke Oven Drip Tanks, Looking West
2-10	Unit #12.02 Coke Oven Drip Tanks, Looking East
2-11	Unit #12.08 Coke Oven Drip Tanks, UST, Looking South
2-12	Unit #11, Looking NW
2-13	Unit #12.06 Coke Oven Drip Tanks, Looking NW
2-14	Unit #12.04 Coke Oven Drip Tanks, Looking NE
2-15	Unit #12.07 Coke Oven Drip Tanks, Looking On Right
2-16	Unit #13 Looking NE
2-17	Unit #18 Looking NW
2-18	Unit #18 Looking West
2-19	Unit #18 RCB's /// Acid Tank
2-20	Skimmed Oil Container, Looking West
2-21	Unit #15
2-22	Unit #16 Deep Disposal Well #1

2-23	Unit #16 Deep Disposal Well #2
2-24	Unit #16 Deep Disposal Well Pressure Tank
3-1	Light Oil Muck Tanks, Looking North
3-2	Light Oil Muck Tanks
3-3	Bioplant Unit #18, Looking West
3-4	Coke Tar Decanter Pit
3-5	Unit #12.05, Looking SW
3-6	Unit #12.09, (UST), Looking North
3-7	Unit #12.10 (UST), Looking North
3-8	Unit #12.12 (UST), Looking NE
3-9	Unit #12.11 (UST), Looking South
3-10	Unit #21 Portable Waste Oil Tanks (7), Looking West
3-11	Unit 21.6 Portable Oil Tanks in Hot Strip Area Looking Southeast
3-12	Unit #21.6 Portable Oil Tanks in Hot Strip Areas Looking Northeast
3-13	Unit #24 Pickle Liquor Tanks, Looking East
3-14	Unit #21.4 Pickle Liquor Tanks, Looking NE
3-15	Unit #21.1 Portable Oil Tanks in A-39 Area, Looking North
3-16	Unit #21.3 Portable Oil Tanks in J-9 Area
3-17	Unit #7 BOF Baghouse
3-18	Unit #7 BOF Baghouse in J-9, Looking SE
3-19	Unit #7 BOF Baghouse in J-9
3-20	Unit #8 Ladle Dumping Concrete Pit Inside Building
3-21	Unit #8 Ladle Dumping Steel Pit, Looking South
3-22	Unit #8 Waste Pile Clammed-Out of Steel Ladle Dumping Tank, Looking South
3-23	Unit #9 Baghouse and Storage Silo
3-24	Unit #9 Baghouse and Storage Silo

3-25 Unit #9 Baghouse and Storage Silo

V. Suggestions for Further Action

A visual site inspection was performed at Rouge Steel in Dearborn, Michigan on April 5, 1988. Because of the limited information available on the local soil and hydrogeologic condition, it is impossible to recomment the next step of the corrective action process. If the facility is built up on slag and fill material, then soil sampling is pprobably not warranted, and a shallow ground water investigation should be instituted to assess the effect Rouge's waste management practices hqve had on the site. If it is possible to sample natural soils on site, then a soil sampling program should be instituted by Rouge.

Unit #1 is an active nonhazardous waste pile

E. Solid Waste Management Units (SWMU)

Unit #1: Waste Material Accumulation Pile

Unit Description: Waste pile located at the Northeast boat dock. <90 day storage.

Underlain By: Concrete

Start-up date: unknown

Closure date: Active

Wastes Managed: This wastepile manages three wastes: (1) wastewater treatment filter cake, (2) Kish, and (3) Desulfurizer dust. The filter cake is removed from the Blast Furnace Gas Scrubber using clarifiers and vacuum filters. Kisit is captured using a baghouse at the Hot Metal Reladling Station in the Basic Oxygen Furnace (BOF) Building. The Desulfurizer Dust is captured using a Baghouse at the BOF Defulferizer. Both Kish and Desulfurizer Dust are deposited in dumpsters at the base of the respective baghouses and removed daily to the accumulation area. These two waste materials are covered with the filter cake using a front end loader. The accumulated material is removed by truck to an off-site landfill twice each week. These three waste materials are not considered to be hazardous but may contain Hazardous Constituents.

Response Controls: Concrete lined

History of Release: none documented

Unit #2: Ladle Dumping Pit - Pig Cast

Unit Description: Pit that accepted waste solid skull and any molten metal or slag during the cleaning process for the hot metal ladles. Pit was "cleaned" two times per week and material was sold to a vendor who removed the waste off-site for processing. The pig cast building is currently used for ladle repair.

Underlain: Soil

Start-Up Date: Cleaning process using pits commenced in 1952.

Closure Date: Use of the Ladle Dumping Pit ceased on December 2, 1981. A ladle pile is now maintained in pig cast building.

Wastes Managed: The inactive ladle dumping pit managed solid skull, molten metal, and slag. The active pig cast building now receives ladle lining waste brick debris and accumulates it in a pile.

Release
~~Respons~~e Controls: none

History of Release: none documented

Unit #3: Lime Settling Pit - Pig Cast

Unit Description: Pig iron molds are sprayed with a lime-water mix to coat the molds and prevent molten iron from sticking to the mold. The overspray and draw-off drop onto a cement pad (30" X 10") which drained into a concrete pit (8') where the solids would settle. Water overflow's into a storm sewer.

Underlain by: Concrete

Start-up date: 1952

Closure date: December 2, 1981, Facility discontinued the production of Pig Iron.

Wastes Managed: Waste-water from overspray and draw-off went to sanitary sewer. Solids that accumulate in lime settling pit are removed twice each month and transported to an off-site landfill.

Release Controls: Concrete

History of Release: none documented

Unit #4: Demineralized Effluent - Power House

Unit Description: Spent wash solution from the Powerhouse Boilers are accumulated in two trunks with a total capacity of 30,000 gallons. A lime sludge is also accumulated in a storage tank.

Underlain By: Concrete Pad w/secondary containment

Start-up date: unknown

Closure date: Actual

Wastes Managed: The Powerhouse Boiler water is demineralized periodically regenerated using acid and caustic solutions. These spent wash solutions are accumulated in tanks. When the regeneration cycle is complete, the spent wash solutions are

discharged through outfall #006 under the authority of an NPDES permit. A lime slurry is also used in this regeneration process. The slurry is accumulated in a storage tank and sprayed on flyash during its removal to an offsite landfill.

Release Controls: Concrete Diked Area

History of Releases: none documented

Unit #5: Fly Ash Removal System

Unit Description: The Fly Ash Removal System consists of electrostatic precipitators, a pneumatic transfer system, a brick storage silo, and covered trucks to transport the ash to an offsite landfill.

Underlain By: Concrete

Start-up date: unknown

Closure date: active

Wastes Managed: Fly Ash is collected in electrostatic precipitators, moved to a storage silo via a pneumatic transfer system, and then removed off-site to a landfill. Fly ash is wetted with water and/or lime slurry during loading.

Release Controls: Concrete Pad

History of Releases: none documented

Unit #6: Bottom Ash Removal System - Power House

Unit Description: Unit is a traveling grate and a concrete pit.

Underlain By: Concrete

Start-up date: unknown

Closure date: Active

Waste Managed: Bottom ash is generated during combustion of coal in the boilers and is collected on a traveling grate and deposited in a concrete pit. The bottom ash is moved to a storage silo using a pneumatic system. Each day the ash is loaded into covered trucks and transported to a landfill.

Release Controls: Concrete

History of Releases: None Documented

Unit #7: Fine and Coarse Dust - BOF

Unit Description: This unit consists or a dropout chamber, an electrostatic precipitator (ESP), screw conveyor, storage silo, muller, and a belt conveyor.

Underlain By: Concrete

Start-up date: unknown

Closure date: active

Waste Managed: During the steel making, dusts generated in the basic oxygen furnace pass trough the ESP and collect in the dropout chamber. screw conveyors move the waste to a muller. Waste is wetted ~~with steam~~, emptied into a belt conveyor, and moved to a storage silo. Both fine and coarse dust are removed daily to an off-site landfill using covered trucks.

Release Controls: Concrete

History of Releases: none documented

Unit #8: Ladle Dumping Operation - BOF

Unit Description: Ladle cars are cleaned by turning them upside-down over a concrete pit with high pressure water sprays. The pit has a concrete bottom with sheet piling sidewalls. Material removed from the pit is piled adjacent to the pit to drain before off-site removal.

Underlain by: Concrete

Start-up date: unknown

Closure date: active

Wastes Managed: Molten Iron is transported from the blast furnaces in the ladle cars. Cars are cleaned using high pressure water sprays over a concrete pit. Material accumulated at the bottom of the pit is removed Bi-weekly using a crane with a clam shell bucket and piled adjacent to the pit. Water is recycled.

Release Controls: Concrete pit

History of Releases: none documented

Unit #9: Electric Arc Furnace Baghouse Dust Storage Silo

Unit Description: Unit consists of a Baghouse, screw conveyors, pneumatic transfer system, and storage silo.

Underlain by: soil

Start-up date: unknown

Closure date: active

Wastes Managed: Dust generated during steel making in electric arc furnaces is collected in a baghouse. The dust is a listed hazardous waste (K061). Storage in a silo is <90 days. Dust is removed by an off-site vendor to a treatment facility.

Release Controls: none

History of Releases: On June 17, 1987, approximately 2yd^3 of K061 was released from pneumatic dust transport system during maintenance. The material was recovered by vacuum truck.

On July 26, 1987, approximately 4yd^3 of K061 was released from pneumatic dust transport system when surge hopper level indicator failed and surge hopper overflowed. The material was recovered by vacuum truck.

On December 7, 1987, approximately 75 pounds of K061 was released from the number 4 compartment when the rotary lock failed.

Unit #10: Coke Oven Gas Holder Waste Tanks

Unit Description: Two steel tanks enclosed by a concrete dike.

Underlain by: Concrete

Start-up date: unknown

Closure date: active

Wastes Managed: Two tanks containing oil, demulsifier, and contaminated waste oil. Oil is used in the

sealant ring of the piston inside the holder. As the oil becomes contaminated, a demulsifier is added to the oil in one of these tanks (10.1) to remove the water. The oil is recycled back into the piston sealant system. The other tank (10.2) contains the contaminated waste oil and water which are removed twice weekly by a licensed vendor. The tanks are entirely enclosed by a concrete dike which would contain up to 150% of the material in the tanks.

Release Controls: Concrete secondary containment

History of Releases: none documented

Unit #11: GG Building Coal Picking Refuse

Unit Description: Hopper of unknown dimensions used to accumulate mine refuse.

Underlain by: Soil

Start-up date: UNKOWN

Closure date: ACTIVE

Wastes Managed: Material accumulates as a result of hand picking of refuse from the coals after breaking the coal and prior to crushing. Material consists of wood, slate, shale, rock, etc. Material accumulates in a hopper until off-site disposal.

Release Controls: none

History of Releases: none documented

Unit #12: Coke Oven Gas Line Drip Water

Unit Description: This unit consists of twelve steel tanks numbered 12.01 - 12.12 ranging in capacity from 1000 gallons to 2000 gallons. All tanks have secondary containment. Seven are above ground and five are underground. The tanks are all inactive and dispersed throughout the facility. One underground tank was being removed during the inspection.

Underlain by: Concrete

Starting date: unknown

Closure date: none are closed none are active

Wastes Managed: Material that accumulates from the condensation of moisture in the coke oven gas line is collected in small tanks. Tanks are pumped by a vendor and waste is disposed of in coke oven recirculating quenching sumps where it is used to quench hot coke.

Release Controls: Concrete Secondary Containment

History of Releases: none documented

Unit #13: Coke Oven Refractory Refuse

Unit Description: This unit is a waste pile located at the south end of the coke oven area near the SS Maintenance Bldg. with a maximum capacity of 10yd^3.

Underlain by: Soil

Start-up date: unknown

Closure date: April 1987

Wastes Managed: Waste consists of refractory lining of silica and ceramic binders. The waste accumulates at the SS Maintenance Building from the ~~coke~~ COKE oven door rebuilding operation. Refractory lining from the doors is scrapped and removed and allowed to accumulate in a pile on the ground.

Release Controls: None

History of Releases: none documented

Unit #14: Coke Oven Tar Decanter Sludge

Unit Description: Concrete collection pit for K087 waste on a <90 day status.

Underlain by: concrete

Start-up date: unknown

Closure date: unknown

Wastes Managed: Coke oven tar decanter sludge is accumulated in the concrete collection pit on a less than 90 day

basis. Waste is removed from the pit weekly after being stabilized with coke oven coke breeze and is then transported off-site for disposal to a licensed hazardous waste landfill

Release Controls: Concrete pit

History of Releases: none documented

Unit #15: AC still bottoms holding Lagoon (100' x 20')

Unit Description: Holding Lagoon with a capacity of approximately 50,000 gallons, ~~100' x 20'~~ Lagoon was only in operation long enough the relocate the discharge into Detroit's Sanitary Sewer System. Lagoon was closed and backfilled at the completion of the sewer relocation.

Underlain by: Brick-lined

Start date: Mid 1950's

Closure date: Mid 1950's (operated less than one year)

Wastes Managed: Wastes are identified as AC still bottoms. Lagoon was necessary to remove still bottoms so they wouldn't be discharged to the power house sewer.

Release Controls: Brick-lined.

History of Releases: none documented

Unit #16: Coke Oven Deep Disposal Well

Unit Description: Well #1 west drilled in 1956 into Sylvania Formation. Well #2 was drilled in 1976 into the Mt. Simon Formation. ~~The~~ 1976 well is operating pursuant to a U.S. EPA UIC permit.

Underlain by: N/A

Start date: Well #1 - 1956
Well #2 - 1976

Closure date: Well #1 was used as a stand-by well from 1976 - 1984, when it was plugged and abandoned.
Well #2 is active.

Wastes Managed: Coke oven final cooler waste water. Waste analysis can be found in UIC permit.

Release Controls: N/A

History of Releases: The #1 deep well developed a hole in the casing at 219' below the surface in 1973. A workover permit was issued by MDNR. A new line casing was installed and was in place at the time of plugging and abandonment of the well in December 1984. An unknown quantity of material was lost into the Sylvania Formation.

Unit #17: Coke Oven Light Oil Muck Tank

Unit Description: Two tanks, <90 day storage

Underlain by: Concrete

Start-up date: unknown

Closure date: April 1987

Waste Managed: Tank contains a waste product of intermediate density between that of coke oven light oil and water. Waste is composed of polymerized adsorption oil and is considered to be a hazardous waste because it is similar to K087. Storage is <90 day. The tank was empty during inspection.

Release Control: Concrete Secondary Containment

History of Releases: None documented

Unit #18: Coke Oven Biological Treatment Plant

Unit Description: Unit consists of a 70,000 gallon concrete equalization basin and a neutralization tank.

Underlain by: soil

Start date: July 1985

Closure date: 1987

Wastes Managed: Plant is used to treat the AC still bottoms, the diammonium phosphate plant effluent and the wastewater from the coke oven light oil plant. Concrete equalization basin acts to mix and equalize the fluid to the rotating biological ~~contractors~~ CONTACTORS. A neutralization tank then adjusts the pH and skims any tramp oil that might have accumulated. Effluent is discharged to City of Detroit Sanitary Sewer System.

Release Controls: none

History of Releases: none documented

Unit #19: PCB Storage Building

Unit Description: Unit consists of two PCB storage areas. Area #1 had a capacity of 30,000 gallons.

Underlain by: Concrete

Start-up date: 1980 for both areas

Closure date: One area closed in 1982.
The other area is currently used for temporary PCB storage.

Wastes Managed: PCB's are stored in two drum storage areas. Area #1 is located in the vicinity of the Rouge Powerhouse. Area #1 was closed and decontaminated. Area #2 was used to store used PCB-filled transformers and rectifiers. Area #2 is currently being used to temporarily store used transformers and samples taken for dielectric strength and moisture.

Release Controls: Area #1 is diked.

History of Releases: none documented

Unit #20: Underground Storage Tank - Waste Oil

Unit Descriptions: 10,000 gallon steel underground tank

Underlain by: unknown

Start date: 1980

Closure date: Active

Wastes Managed: Installed to store waste oil from various compressor stations throughout Rouge Complex. Material is removed bi-monthly by licensed vendors for disposal off-site.

Release Controls: unknown

History of Releases: none documented

Unit #21: Dempster Containers & Tanks

Unit Description: Open containers & tanks containing waste oils. Located at A-39, cold rolling mills; J-9 shop area; hilo repair shop area; stabilizing mill; and hot strip mill scale pit areas.

Underlain by: Usually Concrete, Containers are portable

Start-up data: unknown

Closure date: Active

Wastes Managed: The waste consists of general tramp oil generated from burning, leakage, rustproofing oil runoff, crankcase oils, etc. The containers are pumped out daily by licensed vendors for disposal off-site.

Release Controls: N/A

History of Releases: none documented

Unit #22: Spent Mold Foundry Sand

Unit Description: Spent Mold Foundry Sand was allowed to spill out, presumably on the ground(40" X 60" Management Area). Castings produced were taken to EE Building for cleaning. Blast furnace sand is now stored here.

Underlain by: Soil

Start-up date: 1962

Closure date: 1985

Wastes Managed: Facility was used to manufacture the molds & stools required in the manufacturer of steel ingots produced by the basic oxygen furnaces, and electric arc furnaces. Molten ~~from~~ is poured in the sand molds and allowed to ~~solidify~~ solidify. After solidification, the sand is allowed to pour out, presumably on the ground. Spent sand is removed for offsite disposal. Castings are taken to the EE building for cleaning. Refuse from the cleaning area is removed off-site for disposal.

Release Controls: none

History of Releases: none documented

Unit #23: Blast Furnace Wastewater Treatment Plant

Unit Description: Unit consists of ~~two~~ THICKENER oxidation tanks, two deep bed filters, six clarifiers, a vacuum filter, and a solid ~~thick end~~. After treatment the wastewater is discharged through an NPDES permit.

Underlain by: Concrete pads

Start-up date: 1980

Closure date: Active

Wastes Managed: The treatment plant treats blowdown water from the blast furnaces cooling system. The blowdown water contains traces of ammonia, cyanide and phenol which are destroyed by means of alkaline chlorination, using sodium hpychlorite as the chlorinating agent in two oxidation tanks in tandem. After chlorination, any residual chlorine is reduced using sodium bisulfate as a reducing agent. Initially waste is treated in six clarifiers to remove suspended solids. The solids are dewatered in a vacuum filter for off-site disposal; the filtrate is returned to the clarifiers for further treatment. Wastewater is discharged through outfall 0048 through an NPDES permit (no. MI0043524). Prior to discharge, the waste is filtered through two dual media (anthracite and sand) deep bed filters.

Release Controls: Concrete pads

History of Releases: Release of unknown quantity occurred from clarifier #1

Unit #24: Cold Mill Waste Pickle Liquor

Unit Description: Unit consists of two holding tanks and three 40,000 gallon <90 day storage tanks.

Underlain by: Limestone Gravel

Start-up date: unknown

Closure date: active

Wastes Managed: Waste pickle liquor (K062) is generated during the hydrochloric acid pickling process to remove scale from steel sheet. Waste from Rouge Steel Nos. 1, 2 and 3 pickle lines is collected in the holding tank adjacent to the No. 1 pickle line while the waste from the No. 4 pickle line is

collected in a holding tank adjacent to the No. 4 line. Both holding tanks are periodically pumped to three 40,000 gallon storage tanks located immediately west of the pickle-line area outside the building. The waste is removed daily for off-site disposal.

Release Controls: limited

History of Releases: none documented

Unit #25: Drum Storage Area

Unit Description: Unit is a <90 day drum storage area approximately 10' X 10' in size with a concrete floor and concrete block dike. The maximum capacity of the unit is 16, 55-gallon drums.

Underlain by: Concrete

Start-date: unknown

Closure date: active

Wastes Managed: Waste 1,1,1,trichloroethane on a <90 day basis.

Release Controls: Diked Concrete Pads

History of Releases: None documented

If natural soil exists then a soil sampling program should be initiated to asses contamination

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SUGGESTIONS FOR FURTHER ACTION

A visual site inspection was performed at Rouge Steel in Dearborn, Michigan on April 5, 1988. Because of the limited information available on the local soil and Hydrogeologic conditions it is impossible to recommend the next step of the corrective action. If the facility is built-up on slag and fill material then soil sampling is probably not warranted and shallow groundwater investigations should be instituted to assess the effect Rouge's waste management practices have had on the site.

Unit #1 is an active nonhazardous waste pile managing filter cake, kish and desulferizer dust on a <90 day basis. The waste pile is located within a concrete pit area. Because of the close proximity of the waste pile to the canal connected to the Rouge River, concern exists that hazardous constituents may migrate beyond the unit boundary, and into the River. The potential for this occurrence should be addressed by the facility. A determination should be made by the facility on what hazardous constituents are present in the waste.

Unit #2 is an inactive ladle dumping pit that was in operation from 1952-1981. Solid shell, molten metal and slag would drop into the pit during cleaning operations. The pit was cleaned two times a week and the material was sold to a vendor. Currently, the pit ~~was~~ is used to accumulate brick debris from the re-lining of ladles. A determination if any hazardous constituents occur in the soil should be made by the facility.

Unit #3 is an inactive lime settling pit that was in operation from 1952-1981 when the facility produced pig iron. Overspray of ~~lime-~~water mixture on the molds would drop into the concrete pit where solids would settle. Water overflowed into the storm sewer. Solids were removed twice a week for off-site disposal. No further action appears necessary for their unit.

Unit #4 is composed of two active 30,000 gallon aboveground tanks on a concrete pad with secondary contaminant. The tanks are used to store spent acid and caustic work solutions for the Powerhouse Boilers. The solutions are discharged at a controlled rate through outfall #006 under an NPDES permit. No further action appears necessary for this unit.

Unit #5 is the fly ~~ash~~ dust removal system that consists of electrostatic precipitators, a pneumatic transfer system, and a storage silo. The precipitators and transfer system are located ~~on the~~ top of the Power House Building while the storage silo is elevated approximately fifteen feet above a concrete pad. No significant releases are suspected from this unit.

Unit #6 is the bottom oils removal system ~~converting~~ consisting of a traveling grate, a concrete pit, a pneumatic transfer system, and a storage silo. All components are located inside the Power House Building. No significant release are expected from this unit.

Unit #7 is the Basic Oxygen Furnace (BOF) ~~fire~~ fine and ~~course~~ coarse ~~duct~~ dust accumulation system. This unit ~~converts~~ consists of several components located both on top of and

inside the BOF Building. ~~Ducts~~ DUSTS are removed daily using covered trucks to an off-site landfill. No releases are suspected from this unit.

Unit #8 is the ~~OBF~~ BOF ladle dumping system. The operation consists of a concrete pit inside the ladle dumping building, a conveyance sluice, an outside concrete pit with steel piling side-walls, and a waste pile. Ladle cars are cleaned with high pressure spray inside the building, debris drops into the concrete pit, falls through the conveyance sluice into the outside concrete pit for de-watering. The water is recycled. The accumulated material is drained-out biweekly to a waste pile. The waste pile material is removed ~~one~~ ONE to two times per week for off-site disposal. It should be evaluated whether any hazardous constituents have migrated beyond the unit.

Unit #9 is the Electric ~~Arc~~ ARC Furnance (EAF) baghouse storage silo. This unit consists of a baghouse, a pneumatic transfer system and a storage silo. The unit manages K061 hazardous waste on a less than 90 day basis. Three releases in 1987 and one release in 1988 have been reported for this unit. An evaluation must be made to determine if hazardous waste or hazardous constituents have contaminated the nearby soil or ~~the nearby~~ Rouge River.

Unit #10 is composed of two steel ~~code~~ COKE over gas holder waste tanks. Two waste oil tanks are utilized for this unit to 1) ~~demulfify~~ DEMULSIFY oil that is recycled back into the gas holder piston and 2) to accumulate contaminated oil that is removed by an off-site vendor twice a week. The tanks have a concrete secondary containment. No releases are suspected from this unit.

Unit #11 is the ~~66~~ 66 Building Coal Picking ~~Before~~ REFUSE Hopper. This unit is composed of hand-picked debris from the coal (wood, rock, etc.) and is hauled off-site for disposal. No significant releases are suspected from this unit.

Unit #12 consists of twelve gas line drip water collection tanks (7 aboveground, 5 below ground). All aboveground tanks have secondary containment that exhibited oil accumulation and staining. No evidence of releases were observe outside the containment. All tanks are currently inactive. It is unknown whether secondary containment exists for underground tanks. Releases of hazardous constituents is suspected from ~~their~~ ~~tanks and~~ the should be investigated by the facility.

oil accumulation staining inside the secondary containment.

there

Unit # 13 is an inactive waste pile outside the SS Building that was last operated in April 1987. The waste consists of refractory lining of silica and ceramic binders. No significant releases are suspected from this unit.

Unit # 14 is the ~~code~~ COKE oven tar decanter sludge collection area. This unit handled K087 hazardous waste. Coke oven breeze was used to stabilize this waste for off-site disposal. A CAFO was developed by U.S. EPA regarding this unit. The facility ~~has~~ HAS filed a verification of clean-up plan with the State for final closure of the unit. ~~At~~ At this point, any corrective action necessary for this unit will be tied in with a site wide release assessment program.

Unit # 15 is the former location of the AC still bottoms holding lagoon that was in operation for about one year in the 1950's while a sewer line was relocated. The exact nature of the waste is unknown. Further information ~~has been~~ requested of the facility.

should be

Unit # 16 is the coke over deep disposal well #1 that was drilled in 1956 and operated until 1984 when it was plugged and abandoned. Deep disposal well #2 was drilled in 1976 and has a current UIC permit. A release occurred from Well #1 in 1973 when a hole in the casing developed at 219 feet below the surface. An unknown quantity of waste was lost.

Unit #17 is composed of two steel <90 day storage tanks that contain a waste product of intermediate density between coke oven light oil and water. The material is removed off-site by a licensed vendor. The sludge is disposed of as hazardous waste K087. No releases are suspected from this unit.

Unit #18 is the coke oven Biological treatment Plant. This inactive plant consists of a concrete equalization basis and a neutralization tank. No releases are suspected from this unit.

Unit #19 is an inactive PCB storage area inside the Powerhouse Maintenance Building. No releases are suspected from this unit.

Unit #20 is a 10,000 gallon active underground storage tank containing waste oils. Material is removed bimonthly by licensed vendors for reclamation. No releases are suspected from this unit.

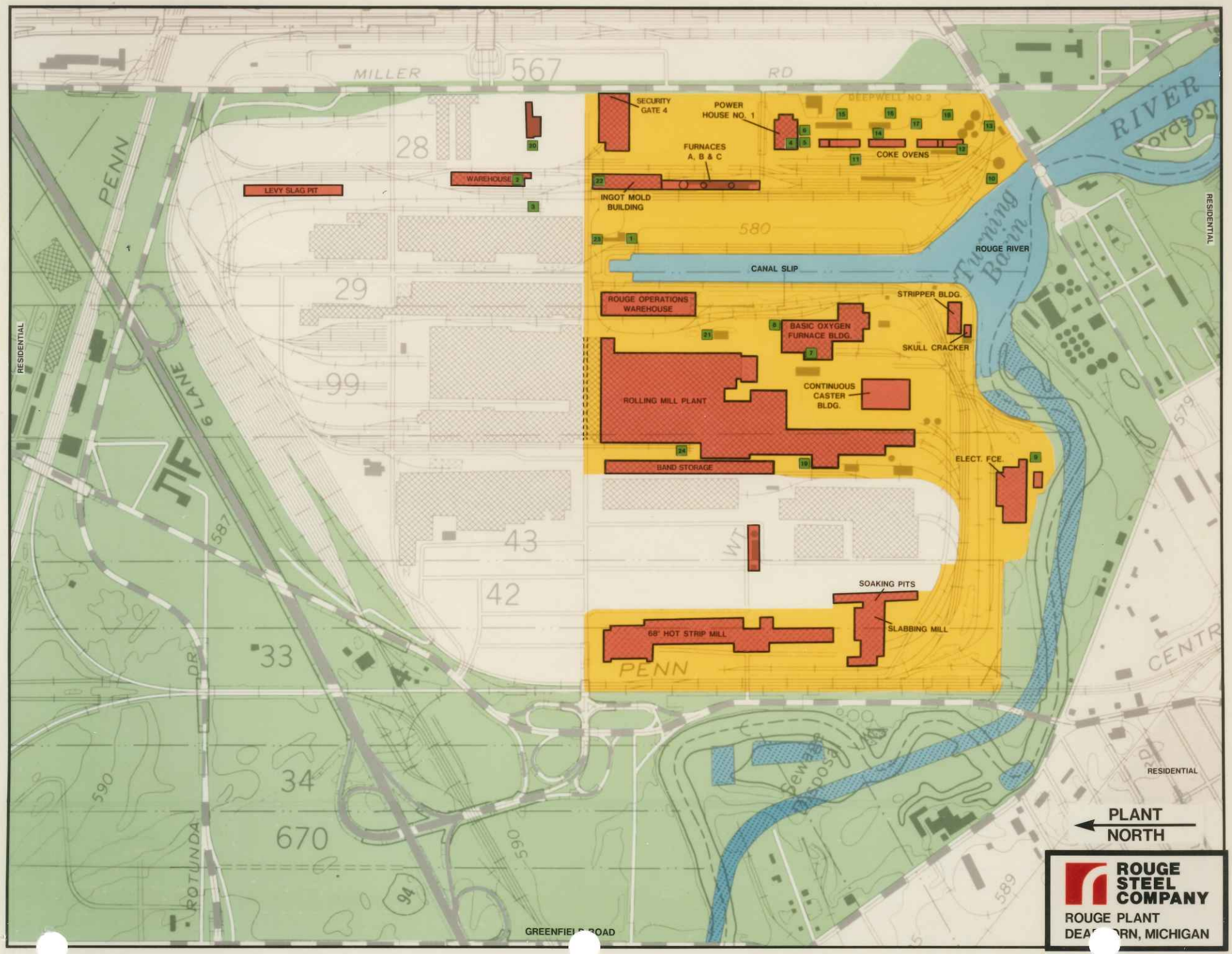
Unit # 21 consists of several portable Dempster tanks of approximately 500 gallons each. These tanks contain general waste oils and are pumped out daily by licensed vendors. No releases are suspected from these tanks.

Unit # 22 is the spent mold foundry sand area located on the dirt floor of the EE building. It should be determined if hazardous constituents were known to occur in the foundry sand. If hazardous constituents ~~were to~~ occur in the sands then soil sampling may be necessary. If hazardous constituents ~~were not~~ ARE NOT present in the foundry sands then no further action is recommended.

Unit # 23 is the Blast Furnace Wastewater Treatment Plant consisting of two oxidation tanks, three deep bed filters, six clarifiers, a vacuum filter, and a solids thickener. A release of unknown quantity occurred from clarifier #1. The facility should quantify this release and assess hazardous constituents may have contaminated the soil.

Unit # 24 is composed of three <90 day storage tanks for pickle liquor and two holding tanks. No releases are suspected, however, the secondary containment consists of limestone gravel and doesn't appear adequate to contain a release.

Unit #25 is a <90 day drum storage area not previously identified. No releases are suspected from this unit.


MILLER
RD
567
SECURITY GATE 4
POWER HOUSE NO. 1
DEEPWELL NO. 2
FURNACES A, B & C
COKE OVENS
RIVER
WAREHOUSE
LEVY SLAG PIT
INGOT MOLD BUILDING
580
ROUGE RIVER
CANAL SLIP
Turning Basin
RESIDENTIAL
PENN
ROUGE OPERATIONS WAREHOUSE
STRIPPER BLDG.
BASIC OXYGEN FURNACE BLDG.
SKULL CRACKER
6 LANE
ROLLING MILL PLANT
CONTINUOUS CASTER BLDG.
BAND STORAGE
ELECT. FCE.
587
579
SOAKING PITS
68" HOT STRIP MILL
SLABBING MILL
PENN
ROTUNDA DR
590
595
589
RESIDENTIAL
PLANT
NORTH
ROUGE STEEL COMPANY
ROUGE PLANT
DEARBORN, MICHIGAN

LIME SETTLING PIT - PIG CAST (3)

From 1952 to December 2, 1981, the company produced pig iron for use in foundries. The pigging was accomplished by pouring molten iron at a controlled rate into a trough and runner system through which the iron would run to the pig machine. The machine is an endless chain of molds which would move along inclined track from beneath the runner to a head sprocket located over a railroad car. As the mold chain moved from the head sprocket to the base sprocket, the molds were sprayed with a lime-water mix to coat the molds to prevent molten iron from sticking to the mold. The overspray and drain-off would drop onto a cement pad which drained into a concrete pit where the solids would settle. The water overflowed into a storm sewer. The solids were removed from the pit twice each week and transported to an off-site landfill. The waste was not a hazardous waste. Any hazardous constituents which the waste may have contained are not believed to have been present at meaningful levels.

DEMINERALIZER EFFLUENT - POWER HOUSE (4)

Water used in the Power House boilers is demineralized to prevent fouling of the boiler tubes. Periodically, it is necessary to regenerate the demineralizer using acid and caustic solutions. The spent wash solutions are accumulated in two tanks with a total capacity of 30,000 gallons. At the end of the regeneration cycle, the solution is drained at a controlled rate through a pH monitoring/controlling unit and discharges through Outfall #006 under the authority of N.P.D.E.S. Permit No. MI0043524. A lime slurry is also used during the regeneration of the demineralizer. This material is accumulated in a storage tank, and sprayed on the flyash during removal of the ash. The wetted ash is subsequently disposed of in an off-site landfill. The spent wash solution and lime slurry are not hazardous wastes, but they may contain hazardous constituents.

FLY ASH REMOVAL SYSTEM - POWER HOUSE (5)

Fly ash generated during combustion of coal in the boilers is collected using electrostatic precipitators. The ash is moved to a storage silo using a pneumatic system. Each day the ash is loaded into covered trucks and transported off-site to a landfill. During loading the ash is wetted with water and/or lime slurry from the demineralizer regeneration process (see above). The ash is not a hazardous waste, but may contain hazardous constituents.

BOTTOM ASH REMOVAL SYSTEM - POWER HOUSE (6)

Bottom ash generated during combustion of coal in the boilers is collected on a traveling grate and deposited in a concrete pit. The waste is moved to a storage silo using a pneumatic system. Each day the ash is loaded into covered trucks and transported to a landfill. The ash is not a hazardous waste, but may contain hazardous constituents.

FINE AND COARSE DUST - BOF (7)

During the steel making process in the Basic Oxygen Furnace (BOF), dust is generated which is entrained in the gases leaving the vessel. The gases and dust pass through an electrostatic precipitator (ESP). A dropout chamber between the vessel and the ESP collects the larger and heavier dust particles (coarse dust). This material is moved from the dropout chamber to a storage silo using a screw conveyor. The dust not collected in the dropout chamber (fine dust) is collected at the ESP. Screw conveyors move the fine material to a muller where it is wetted using steam. It is then emptied on to a belt conveyor and moved to a storage silo. Both fine and coarse dust are removed daily to an off-site landfill using covered trucks. These materials are not hazardous wastes, but may contain some hazardous constituents.

LADLE DUMPING OPERATION - BOF (8)

Molten iron used in the BOF is transported from the blast furnaces in ladle cars. Periodically the cars are cleaned at the ladle dumping station by turning the ladle upside down over a concrete pit which has high pressure water sprays installed in it. The sprays carry the materials being emptied from the car down a sluice into a pit where the material settles to the bottom. This pit has a concrete bottom and sheet piling sidewalls. The water is recirculated. The material is removed from the pit bi-weekly using a crane and clamshell bucket. At removal, the material is piled adjacent to the pit to drain. After one to four days the material is loaded into trucks and removed to an off-site storage pile. This material is not a hazardous waste. Any hazardous constituents which this waste may contain are not believed to be present at meaningful levels.

ELECTRIC ARC FURNACE BAGHOUSE DUST STORAGE SILO (9)

Dust generated during steelmaking in the Electric Arc Furnaces (EAF) is collected using a baghouse. Screw conveyors are used to move the dust from the baghouse to a pneumatic system which carries the dust to a storage silo. The dust is removed daily to an off-site treatment facility by a vendor, using enclosed trucks. The dust is a listed hazardous waste (K061). Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

COKE OVEN GAS HOLDER WASTE TANKS (10)

Two tanks are located at the site of the Coke Oven Gas Holder. Oil is used in the sealant ring of the piston inside of the holder. As the oil becomes contaminated, a demulsifier is added to the oil in one of these tanks to remove the water. The oil is recycled back into the piston sealant system. The other tank contains the contaminated waste oil and water which are removed twice weekly by a licensed vendor. The tanks are entirely enclosed by a concrete dike which would contain up to 150% of the material in the tanks. The material is not a hazardous waste, but may contain hazardous constituents.

GG BUILDING COAL PICKING REFUSE (11)

This material accumulates as a result of hand picking of refuse from the coal after breaking the coal, and prior to crushing the coal. The material consists of mine refuse such as wood, slate, shale, rock, etc. The material is accumulated in a hopper which is emptied as required for off-site disposal. The material is not a hazardous waste. Any hazardous constituents which this waste may contain are not believed to be present at meaningful levels.

COKE OVEN GAS LINE DRIP WATER (12)

This material accumulates from the condensation of moisture in the coke oven gas. The waste is collected at gas drip collection points throughout the gas distribution system in the plant. The waste is collected in diked tanks and small undiked tanks (approximately 10 gallons). Prior to 1973, at most locations the material was not collected. The waste from the tanks is pumped by licensed vendors and disposed of in coke oven recirculating quenching sumps where it is used to quench hot coke. These wastes are not hazardous wastes, but may contain hazardous constituents.

COKE OVEN REFRACTORY REFUSE (13)

This material accumulates at the SS Maintenance Building from the coke oven door rebuilding operation. The refractory lining from the doors is removed and scrapped; it consists mainly of silica with ceramic binders. The material is allowed to accumulate on a pile on the ground at the south end of the coke oven area where it is removed monthly for off-site disposal. The material is not a hazardous waste. Any hazardous constituents which this waste may contain are not believed to be present at meaningful levels.

COKE OVEN TAR DECANTER SLUDGE (14)

This facility is a concrete collection pit for coke oven tar decanter sludge. The waste material is removed from the pit weekly after being stabilized with coke oven coke breeze. This material is listed as a hazardous waste (K087) and is removed off-site for disposal in a licensed hazardous waste landfill. Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

AC STILL BOTTOMS HOLDING LAGOON (15)

Immediately adjacent to the coke oven by-products building a holding lagoon (approximately 50,000 gallons) was constructed in the mid 1950's. It was used to hold AC still bottoms until removed for off-site disposal. This procedure was necessary because of the desire to remove these still bottoms from being discharged to the Power House sewer, and relocating the discharge into the sanitary sewer system of the City of Detroit. This lagoon was in use only during the period of relocation of the above sewers. The installation was closed and back-filled at the completion of the sewer relocation. The waste impounded in the lagoon was not considered to be a hazardous waste, but may have contained hazardous constituents.

COKE OVEN DEEP DISPOSAL WELL (16)

In 1956, a deep well (No. 1) was drilled into the Sylvania formation for disposal of coke oven final cooler waste water. This well was used until 1976 when a new and deeper well (No. 2) was drilled into the Mt. Simon formation. The 1956 well was operated pursuant to a permit issued by the Michigan Department of Natural Resources. The No. 1 well was used as a standby well from 1976 until 1984, when it was plugged and abandoned pursuant to 40 CFR 144.28(c). The 1976 well is operated pursuant to permits issued by the U.S.E.P.A. (MI-163-1W-0002), and MDNR.

COKE OVEN LIGHT OIL MUCK TANK (17)

This tank is used to contain a waste product of intermediate density between that of coke oven light oil, and water. It is composed of polymerized absorption oil (used to absorb the light oil from the coke oven gas stream). The material is held in this tank until it is removed for off-site disposal by a licensed vendor. The waste is considered to be a hazardous waste in that it is similar to a listed hazardous waste (K087). Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

COKE OVEN BIOLOGICAL TREATMENT PLANT (18)

This plant is used to treat the AC Still Bottoms, the diammonium phosphate plant effluent and the waste water from the coke oven light oil plant. The plant has a 70,000 gallon concrete equalization basin that acts to mix and equalize the feed to the rotating biological contactors. A neutralization tank follows the equalization tank, where the pH is stabilized and any tramp oil that might have accumulated is skimmed. The plant was installed pursuant to 40 CFR 403 Pretreatment Regulations and the effluent is discharged into the City of Detroit sanitary sewer system. The waste oil is not a hazardous waste, but may contain hazardous constituents.

PCB STORAGE BUILDINGS (19)

Two PCB storage areas were designated in 1980 and building alterations were made so that the PCB storage for disposal regulations could be met. One of the areas located in the vicinity of the Rouge Power House was used for drum storage (approximately 30,000 gallons maximum) of PCB waste until 1982 when the material was removed by a licensed vendor and subsequently incinerated. This area was later closed and completely decontaminated. The other area was used to store used PCB filled transformers and rectifiers. The equipment was drained on-site and the liquids incinerated, as above. The transformer carcasses and drums were disposed of off-site at an EPA approved PCB landfill. This area is still used for temporary PCB storage (used transformers, samples taken for dielectric strength and moisture). PCB waste is removed within one year pursuant to 40 CFR 761.65.

UNDERGROUND STORAGE TANK - WASTE OIL (20)

This 10,000 gallon tank was installed in 1980 to store waste oil from the various compressor stations throughout the Rouge Complex. The material is removed bi-monthly by licensed vendors for disposal off-site. The waste consists of a mixture of oil and water and is not a hazardous waste, but may contain hazardous constituents.

DEMPSTER CONTAINERS & TANKS (21)

Waste oils are accumulated in open Dempster containers and Dempster tanks at location A-39, Cold Rolling Mills; at the J-9 Shop area; and at the Hilo Repair Shop area. The waste is also collected in tanks at the Slabbing Mill, and at the Hot Strip Mill scale pit areas. The waste consists of general tramp oil generated from bearing leakage, rustproofing oil run-off, crankcase oils, etc. The containers are pumped out daily by licensed vendors for disposal off-site. The waste is not a hazardous waste, but may contain hazardous constituents.

SPENT MOLD FOUNDRY SAND (22)

The Rouge Steel Company Mold Foundry operated for a period from 1962 to 1985. The facility was used to manufacture the molds and stools required in the manufacture of steel ingots produced by the basic oxygen furnaces, and electric arc furnaces. To produce the molds and stools, molten blast furnace iron was poured into sand molds and allowed to solidify in conformance with typical foundry practice. After solidification the cheek (sand holder) was removed and the sand allowed to pour out. The spent sand was removed for off-site disposal. The castings were taken to the EE building in the Rouge Area for cleaning. The refuse from this cleaning operation was also removed for off-site disposal. The material was not considered to be a hazardous waste. Any hazardous constituents which this waste may have contained were not believed to have been present at meaningful levels.

BLAST FURNACE WASTE WATER TREATMENT PLANT (23)

This facility was placed in operation in 1980 to treat the blowdown water from the blast furnace cooling water. This blowdown water contains traces of ammonia, cyanide and phenol which are destroyed by means of alkaline chlorination, using sodium hypochlorite as the chlorinating agent in two oxidation tanks in tandem. After chlorination, any residual chlorine is reduced using sodium bisulfite as a reducing agent. The waste water is discharged through Outfall 004B, under the authority of N.P.D.E.S. Permit No. MI0043524. Prior to discharge the waste is filtered through two dual media (anthracite and sand) deep bed filters. Initially the waste is treated in six clarifiers to remove the suspended solids. The solids are dewatered in a vacuum filter for off-site disposal; the filtrate is returned to the clarifiers for further treatment. The back wash from the deep bed filters is returned to a solids thickener for further treatment. None of the waste water is stored prior to discharge into the Rouge River.

COLD MILL WASTE PICKLE LIQUOR (24)

Waste pickle liquor is generated during the hydrochloric acid pickling process to remove scale from steel sheet. The waste from the Rouge Steel Company Nos. 1, 2 and 3 Pickle Lines is collected in the holding tank adjacent to No. 1 Pickle Line while the waste from No. 4 Pickle Line is collected in a holding tank adjacent to the No. 4 line. Both holding tanks are periodically pumped to three 40,000 gallon storage tanks located immediately west of the pickle line area outside of the building. The waste is removed daily for off-site disposal by licensed vendors. The material is listed as a hazardous waste (K062). Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

POTENTIAL RELEASES

Potential releases of the above wastes could occur during the operation which generates the waste, during loading of the materials into vehicles for removal from the plant, or during transportation to the disposal or treatment facility. The releases could be to the air, as in the case of dusts, or to the surface waters, as in the case of wastewater treatment plant by-passes.

A Spill Prevention Control and Countermeasure/Pollution Incident Prevention Plan (SPCC/PIPP) is in effect to address these issues, and establishes appropriate emergency procedures. To the best of our knowledge and belief, no releases from SWMU's have occurred which would require activation of the procedures outlined in the above mentioned plans.

The #1 deep well developed a hole in the casing at 219' below the surface in 1973. The hole was discovered when a loss of pressure in the annular space developed. A workover permit was issued by the Michigan Department of Natural Resources. A new line casing was installed and was in place at the time of plugging and abandonment of the well in December, 1984. An unknown quantity of material was lost into the formation.

The Rouge Complex includes four outfalls which discharge into the Rouge River. These outfalls are monitored under NPDES permit requirements. Occassionally, the levels of cyanide, phenol, and/or ammonia in the effluents have exceeded the permit limits. These levels were reported in the monthly operating reports submitted to the Michigan DNR. In addition, at times it has been necessary to by-pass water treatment facilities, usually as a result of mechanical and/or electrical failures. These by-passes were also reported to the Michigan DNR.

EXHIBIT V
ROUGE STEEL COMPANY
DEEP DISPOSAL WELL PERMIT
NUMBER MI-163-1W-0002

LEGEND

1. WASTE MATERIAL ACCUMULATION PILE
2. LADLE DUMPING PIT - PIG CAST
3. LIME SETTLING PIT - PIG CAST
4. DEMINERALIZER EFFLUENT - POWER HOUSE
5. FLY ASH REMOVAL SYSTEM - POWER HOUSE
6. BOTTOM ASH REMOVAL SYSTEM - POWER HOUSE
7. FINE AND COARSE DUST - BOF
8. LADLE DUMPING OPERATION - BOF
9. ELECTRIC ARC FURNACE BAGHOUSE DUST STORAGE SILO
10. COKE OVEN GAS HOLDER WASTE TANKS
11. GG BUILDING COAL PICKING REFUSE
12. COKE OVEN GAS LINE DRIP WATER
13. COKE OVEN REFRACTORY REFUSE
14. COKE OVEN TAR DECANTER SLUDGE
15. AC STILL BOTTOMS HOLDING LAGOON
16. COKE OVEN DEEP DISPOSAL WELL
17. COKE OVEN LITE OIL MUCK TANK
18. COKE OVEN BIOLOGICAL TREATMENT PLANT
19. PCB STORAGE BUILDINGS
20. UNDERGROUND STORAGE TANK - WASTE OIL
21. DEMPSTER CONTAINERS AND TANKS
22. SPENT MOLD FOUNDRY SAND
23. BLAST FURNACE WASTE WATER TREATMENT PLANT
24. COLD MILL WASTE PICKLE LIQUOR

Adapted from "United States Department of Interior Geoligical survey, Dearborn Quadrangle, Michigan - Wayne County, 7.5 Minute Series (Topographic)."

Scale 1" = 200'

SSECO

Exhibit VI

EPA Notification of Hazardous Waste Site

United States
Environmental Protection
Agency
Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: FORD MOTOR COMPANY
Street: ONE PARKLANE BLVD, STE 628-W
City: DEARBORN State: MI Zip Code: 48126

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site: ROUGE PLANT
Street: 3001 MILLER RD
City: DEARBORN County: WAYNE State: MI Zip Code: 48121

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): HOUSTON A B M
Phone: (313) 594-0324

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Years): 1915 To (Years): 1956

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☒ Organics
2. ☒ Inorganics
3. ☒ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☒ Unknown
11. ☐ Other (Specify)
STEEL OPN TAR SLUDGE
AMMONIA STILL WASTES

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper · Printing
6. ☐ Leather Tanning
7. ☐ Iron Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating · Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary Refuse
15. ☐ Photofinish
16. ☐ Lab Hospital
17. ☐ Unknown
18. ☐ Other (Specify)
MFG & ASSEMBLY
OF AUTOMOBILES
& COMPONENTS

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261.

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

Form Approved
OMB No. 2000-0138
EPA Form 8900-1

Notification of Hazardous Waste Site — Side Two

Waste Quantity

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

Cubic feet: UNKNOWN

Gallons: _____

Total Facility Area

Square feet: _____

Acres: UNKNOWN

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected or likely releases of wastes to the environment.

☐ Known ☒ Suspected ☐ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

SEE ATTACHED SKETCH

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name: A. B. M. HOUSTON

Street: ONE PARKLANE BLVD, STE 628-W

City: DEARBORN State: MI Zip Code: 48126

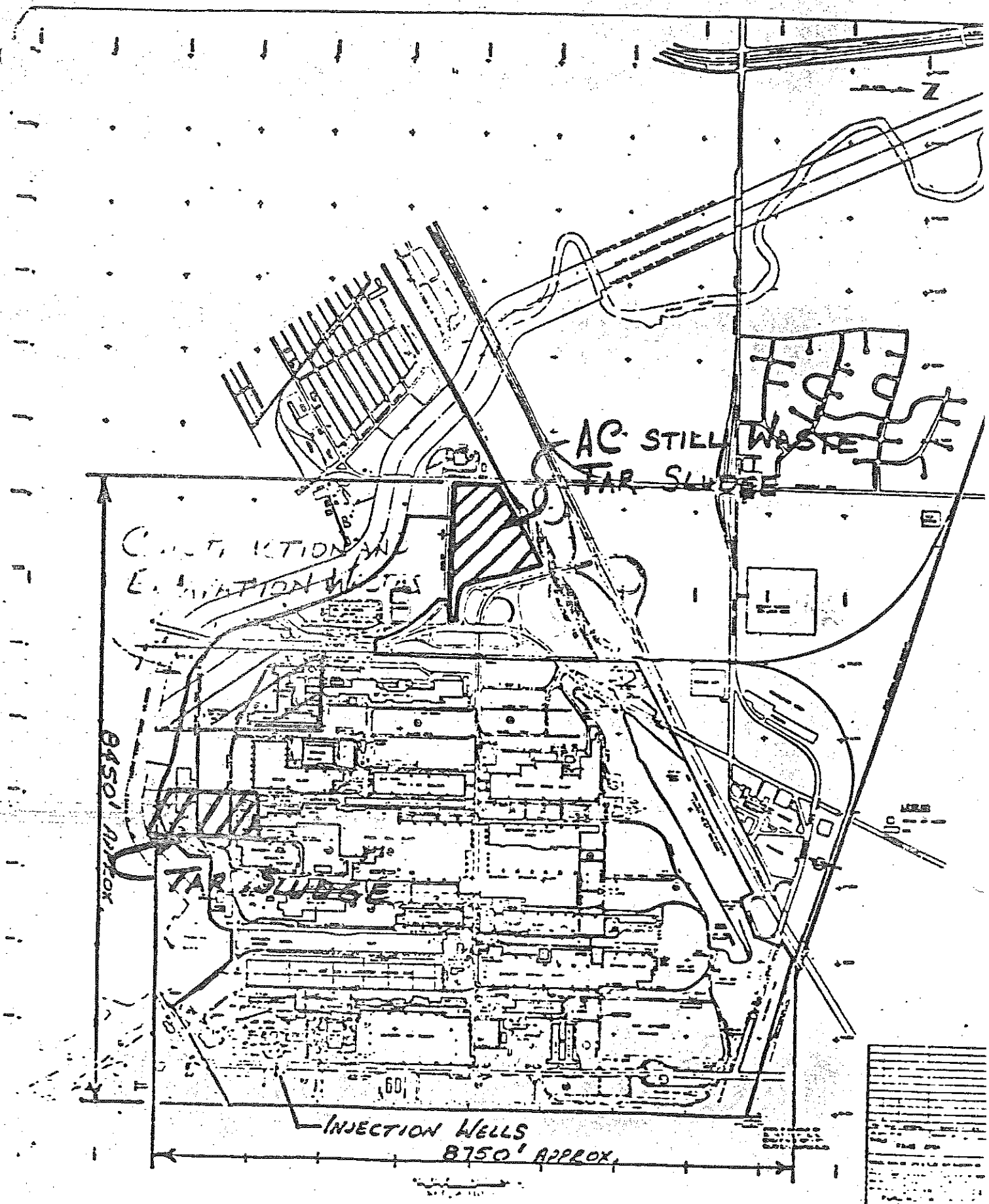
Signature: A B M Houston Date: Nov-9-81

☒ Owner, Present
☐ Owner, Past
☐ Transporter
☒ Operator, Present
☐ Operator, Past
☐ Other

[FR Doc. 80-11289 Filed 4-14-80, 8:45 am]

BILLING CODE 6560-30-C

EPA I.D. Number - MID 087738431



CONVERSATION RECORD

TIME 9:15 AM | DATE 11/29/88

TYPE
☐ VISIT ☐ CONFERENCE ☑ TELEPHONE
☑ INCOMING ☐ OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	ORGANIZATION (Office, dept., bureau, etc.)	TELEPHONE NO:
GERRY DORO SHOWITZ	ROUGE STOR	(313) 323-1260

ROUTING

NAME/SYMBOL	INT

SUBJECT RFA

SUMMARY

Gerry called to ask what the results are of the VSI done out at Rouge Steel last April. I informed him that his audit was lower in priority and the RFA process had temporarily been suspended. I hoped to pick it up in the near future.

I asked Gerry if he had sent me the pictures from the VSI. He said they had. I don't think they did. I told him I needed additional information on the site anyway. When I pick up the file I'll send him a letter requesting the information. When I do that, I'll check on the pictures.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
WAYDE HORTARICK	Wayde M. Hortarick	11/29/88

ACTION TAKEN

SIGNATURE	TITLE	DATE

CONVERSATION RECORD

TIME: 1:05
DATE: 3/10/88

TYPE: ☐ VISIT ☐ CONFERENCE ☒ TELEPHONE ☒ INCOMING ☐ OUTGOING

Location of Visit/Conference:

ROUTING

NAME/SYMBOL	INT
✓	

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: GERRY DOROSCHEWITZ

ORGANIZATION (Office, dept., bureau, etc.): ROUGE STEEL

TELEPHONE NO: (313) 323-1260

SUBJECT: RFA, VSI

SUMMARY

Informed Mr. Doroschewitz of the need for a Visual Site Inspection. Set up inspection for 8:30 AM Tuesday, April 5th, with the option for April 6th.

Taking pictures is OK if they can develop the film. "Maggie" Field & Harry Roberson are the district people. "Maggie" Field is now in the water division. The Wayne Co. Health Dept is now doing MDNR'S RCRA inspections. Mr. Harry Machowski? did one about 6 months ago.

Told Mr. Doroschewitz I would be sending him a formal letter soon.

ACTION REQUIRED: Send letter

NAME OF PERSON DOCUMENTING CONVERSATION:

SIGNATURE: Wayne H. [illegible]

DATE: 3/10/88

ACTION TAKEN

SIGNATURE | TITLE | DATE

MAR 16 1988

5HS-JCK-13

CERTIFIED MAIL
RETURN RECEIPT REQUIRED

Mr. Gerald Doroschewitz
Manager, Environmental Engineering
Rouge Steel Company
3001 Miller Road
P.O. Box 1699
Dearborn, Michigan 48121-1699

Re: RCRA Facility Assessment
Visual Site Inspection
Rouge Steel Company
Dearborn, Michigan
MID 087 738 431

Dear Mr. Doroschewitz:

On November 8, 1984, the Hazardous and Solid Waste Amendments of 1984 (HSWA) were enacted to modify the Resource Conservation and Recovery Act (RCRA). HSWA contains a number of provisions that may impact the future operations of your facility.

The Solid Waste Management Unit (SWMU) certification letter from your facility identified some potential SWMUs. A preliminary review of this material indicates the need for additional information. The RCRA Facility Assessment (RFA) is the first phase in the process to determine whether SWMUs are releasing hazardous waste or hazardous waste constituents to the environment and to determine if corrective measures are required. The RFA includes a Visual Site Inspection (VSI) and a Sampling Visit (SV), if necessary, to gather additional evidence of possible releases.

As has been discussed in a recent telephone conversation with Wayde M. Hartwick of my staff, a VSI of your facility will be conducted on April 5, 1988.

Should you have further questions regarding this matter, please contact Wayde M. Hartwick at (312) 886-6151 for assistance.

Sincerely,

Karl E. Bremer, Chief
RCRA Permitting Branch

cc: Ken Burda, MDNR

5HS:HARTWICK:js:3/9/88:Disc #1

bcc: AUTHOR
Traub
File

Hartwick: Disk #8 3/9/88

CW 3/14/88

5HS:HARTWICK:js:3/9/88:Disc	TYP.	AUTH.	#1 IN. CHIEF	MI. CHIEF	MN/WI CHIEF	OH. CHIEF	RPB CHIEF	O.R. A.D.S.	WMD DIR
RCRA PERMITS									

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: February 11, 1986

SUBJECT: Rouge Steel

FROM: Joseph F. Harrison, Chief
Safe Drinking Water Branch

TO: Dave Stringham, Chief
Solid Waste Branch

Attached for your information and review is Rouge Steel's Preliminary Assessment of Continuing Releases which was sent in response to requirements in their UIC Class I Permit. We will continue to forward all RCRA related reports to you.

EPA FORM 1320-6 (REV. 3-76)

EXHIBIT IV

ROUGE STEEL COMPANY
ROUGE PLANT
DEEP WELL DISPOSAL PERMIT
Number MI-163-1W-0002

Continuing Releases/Corrective Action
Preliminary Assessment

WASTE MATERIAL ACCUMULATION PILE (1)*

Three waste materials are accumulated in the area located at the northeast boat dock. The materials are (1) wastewater treatment filter cake, (2) kish, and (3) desulfurizer dust. The filter cake is removed from blast furnace gas scrubber water using clarifiers and vacuum filters. Kish is captured using a baghouse at the hot metal reladling station in the Basic Oxygen Furnace (BOF) building. The desulfurizer dust is captured using a baghouse at the BOF desulfurizer. Both kish and desulfurizer dust are deposited in dumpsters at the base of the repective baghouses and removed daily to the accumulation area. These two waste materials are covered with the filter cake using a front end loader. The accumulated material is removed by truck to an off-site landfull twice each week. These three waste materials are not hazardous wastes, but may contain hazardous constituents.

LADLE DUMPING PIT - PIG CAST (2)

Between 1952 and December 2, 1981, the hot metal ladles were cleaned at the Pig Cast building. The cleaning process consisted of removing the skull from around the ladle mouth with a ram, then rotating the ladle to an inverted position over a pit. The solid skull, and any molten metal and/or slag would drop into the pit. The pit was cleaned two times per week, and the material sold to a vendor who removed the waste to an off-site location for processing.

Currently, the Pig Cast building is used for ladle repair. The ladle lining is removed using jack hammers. The brick debris is dumped out of the ladle into a pile, then the ladle is re-lined with new brick. The waste brick material is removed to an off-site landfill by a vendor after each ladle lining is removed. The waste brick material is not a hazardous waste. Any hazardous constituents which this material may contain are not believed to be present at meaningful levels.

*Numbers refer to key on the topographic map.

LIME SETTLING PIT - PIG CAST (3)

From 1952 to December 2, 1981, the company produced pig iron for use in foundries. The pigging was accomplished by pouring molten iron at a controlled rate into a trough and runner system through which the iron would run to the pig machine. The machine is an endless chain of molds which would move along inclined track from beneath the runner to a head sprocket located over a railroad car. As the mold chain moved from the head sprocket to the base sprocket, the molds were sprayed with a lime-water mix to coat the molds to prevent molten iron from sticking to the mold. The overspray and drain-off would drop onto a cement pad which drained into a concrete pit where the solids would settle. The water overflowed into a storm sewer. The solids were removed from the pit twice each week and transported to an off-site landfill. The waste was not a hazardous waste. Any hazardous constituents which the waste may have contained are not believed to have been present at meaningful levels.

DEMINERALIZER EFFLUENT - POWER HOUSE (4)

Water used in the Power House boilers is demineralized to prevent fouling of the boiler tubes. Periodically, it is necessary to regenerate the demineralizer using acid and caustic solutions. The spent wash solutions are accumulated in two tanks with a total capacity of 30,000 gallons. At the end of the regeneration cycle, the solution is drained at a controlled rate through a pH monitoring/controlling unit and discharges through Outfall #006 under the authority of N.P.D.E.S. Permit No. MI0043524. A lime slurry is also used during the regeneration of the demineralizer. This material is accumulated in a storage tank, and sprayed on the flyash during removal of the ash. The wetted ash is subsequently disposed of in an off-site landfill. The spent wash solution and lime slurry are not hazardous wastes, but they may contain hazardous constituents.

FLY ASH REMOVAL SYSTEM - POWER HOUSE (5)

Fly ash generated during combustion of coal in the boilers is collected using electrostatic precipitators. The ash is moved to a storage silo using a pneumatic system. Each day the ash is loaded into covered trucks and transported off-site to a landfill. During loading the ash is wetted with water and/or lime slurry from the demineralizer regeneration process (see above). The ash is not a hazardous waste, but may contain hazardous constituents.

BOTTOM ASH REMOVAL SYSTEM - POWER HOUSE (6)

Bottom ash generated during combustion of coal in the boilers is collected on a traveling grate and deposited in a concrete pit. The waste is moved to a storage silo using a pneumatic system. Each day the ash is loaded into covered trucks and transported to a landfill. The ash is not a hazardous waste, but may contain hazardous constituents.

FINE AND COARSE DUST - BOF (7)

During the steel making process in the Basic Oxygen Furnace (BOF), dust is generated which is entrained in the gases leaving the vessel. The gases and dust pass through an electrostatic precipitator (ESP). A dropout chamber between the vessel and the ESP collects the larger and heavier dust particles (coarse dust). This material is moved from the dropout chamber to a storage silo using a screw conveyor. The dust not collected in the dropout chamber (fine dust) is collected at the ESP. Screw conveyors move the fine material to a muller where it is wetted using steam. It is then emptied on to a belt conveyor and moved to a storage silo. Both fine and coarse dust are removed daily to an off-site landfill using covered trucks. These materials are not hazardous wastes, but may contain some hazardous constituents.

LADLE DUMPING OPERATION - BOF (8)

Molten iron used in the BOF is transported from the blast furnaces in ladle cars. Periodically the cars are cleaned at the ladle dumping station by turning the ladle upside down over a concrete pit which has high pressure water sprays installed in it. The sprays carry the materials being emptied from the car down a sluice into a pit where the material settles to the bottom. This pit has a concrete bottom and sheet piling sidewalls. The water is recirculated. The material is removed from the pit bi-weekly using a crane and clamshell bucket. At removal, the material is piled adjacent to the pit to drain. After one to four days the material is loaded into trucks and removed to an off-site storage pile. This material is not a hazardous waste. Any hazardous constituents which this waste may contain are not believed to be present at meaningful levels.

ELECTRIC ARC FURNACE BAGHOUSE DUST STORAGE SILO (9)

Dust generated during steelmaking in the Electric Arc Furnaces (EAF) is collected using a baghouse. Screw conveyors are used to move the dust from the baghouse to a pneumatic system which carries the dust to a storage silo. The dust is removed daily to an off-site treatment facility by a vendor, using enclosed trucks. The dust is a listed hazardous waste (K061). Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

COKE OVEN GAS HOLDER WASTE TANKS (10)

Two tanks are located at the site of the Coke Oven Gas Holder. Oil is used in the sealant ring of the piston inside of the holder. As the oil becomes contaminated, a demulsifier is added to the oil in one of these tanks to remove the water. The oil is recycled back into the piston sealant system. The other tank contains the contaminated waste oil and water which are removed twice weekly by a licensed vendor. The tanks are entirely enclosed by a concrete dike which would contain up to 150% of the material in the tanks. The material is not a hazardous waste, but may contain hazardous constituents.

GG BUILDING COAL PICKING REFUSE (11)

This material accumulates as a result of hand picking of refuse from the coal after breaking the coal, and prior to crushing the coal. The material consists of mine refuse such as wood, slate, shale, rock, etc. The material is accumulated in a hopper which is emptied as required for off-site disposal. The material is not a hazardous waste. Any hazardous constituents which this waste may contain are not believed to be present at meaningful levels.

COKE OVEN GAS LINE DRIP WATER (12)

This material accumulates from the condensation of moisture in the coke oven gas. The waste is collected at gas drip collection points throughout the gas distribution system in the plant. The waste is collected in diked tanks and small undiked tanks (approximately 10 gallons). Prior to 1973, at most locations the material was not collected. The waste from the tanks is pumped by licensed vendors and disposed of in coke oven recirculating quenching sumps where it is used to quench hot coke. These wastes are not hazardous wastes, but may contain hazardous constituents.

COKE OVEN REFRACTORY REFUSE (13)

This material accumulates at the SS Maintenance Building from the coke oven door rebuilding operation. The refractory lining from the doors is removed and scrapped; it consists mainly of silica with ceramic binders. The material is allowed to accumulate on a pile on the ground at the south end of the coke oven area where it is removed monthly for off-site disposal. The material is not a hazardous waste. Any hazardous constituents which this waste may contain are not believed to be present at meaningful levels.

COKE OVEN TAR DECANTER SLUDGE (14)

This facility is a concrete collection pit for coke oven tar decanter sludge. The waste material is removed from the pit weekly after being stabilized with coke oven coke breeze. This material is listed as a hazardous waste (K087) and is removed off-site for disposal in a licensed hazardous waste landfill. Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

AC STILL BOTTOMS HOLDING LAGOON (15)

Immediately adjacent to the coke oven by-products building a holding lagoon (approximately 50,000 gallons) was constructed in the mid 1950's. It was used to hold AC still bottoms until removed for off-site disposal. This procedure was necessary because of the desire to remove these still bottoms from being discharged to the Power House sewer, and relocating the discharge into the sanitary sewer system of the City of Detroit. This lagoon was in use only during the period of relocation of the above sewers. The installation was closed and back-filled at the completion of the sewer relocation. The waste impounded in the lagoon was not considered to be a hazardous waste, but may have contained hazardous constituents.

COKE OVEN DEEP DISPOSAL WELL (16)

In 1956, a deep well (No. 1) was drilled into the Sylvania formation for disposal of coke oven final cooler waste water. This well was used until 1976 when a new and deeper well (No. 2) was drilled into the Mt. Simon formation. The 1956 well was operated pursuant to a permit issued by the Michigan Department of Natural Resources. The No. 1 well was used as a standby well from 1976 until 1984, when it was plugged and abandoned pursuant to 40 CFR 144.28(c). The 1976 well is operated pursuant to permits issued by the U.S.E.P.A. (MI-163-1W-0002), and MDNR.

COKE OVEN LIGHT OIL MUCK TANK (17)

This tank is used to contain a waste product of intermediate density between that of coke oven light oil, and water. It is composed of polymerized absorption oil (used to absorb the light oil from the coke oven gas stream). The material is held in this tank until it is removed for off-site disposal by a licensed vendor. The waste is considered to be a hazardous waste in that it is similar to a listed hazardous waste (K087). Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

COKE OVEN BIOLOGICAL TREATMENT PLANT (18)

This plant is used to treat the AC Still Bottoms, the diammonium phosphate plant effluent and the waste water from the coke oven light oil plant. The plant has a 70,000 gallon concrete equalization basin that acts to mix and equalize the feed to the rotating biological contactors. A neutralization tank follows the equalization tank, where the pH is stabilized and any tramp oil that might have accumulated is skimmed. The plant was installed pursuant to 40 CFR 403 Pretreatment Regulations and the effluent is discharged into the City of Detroit sanitary sewer system. The waste oil is not a hazardous waste, but may contain hazardous constituents.

PCB STORAGE BUILDINGS (19)

Two PCB storage areas were designated in 1980 and building alterations were made so that the PCB storage for disposal regulations could be met. One of the areas located in the vicinity of the Rouge Power House was used for drum storage (approximately 30,000 gallons maximum) of PCB waste until 1982 when the material was removed by a licensed vendor and subsequently incinerated. This area was later closed and completely decontaminated. The other area was used to store used PCB filled transformers and rectifiers. The equipment was drained on-site and the liquids incinerated, as above. The transformer carcasses and drums were disposed of off-site at an EPA approved PCB landfill. This area is still used for temporary PCB storage (used transformers, samples taken for dielectric strength and moisture). PCB waste is removed within one year pursuant to 40 CFR 761.65.

UNDERGROUND STORAGE TANK - WASTE OIL (20)

This 10,000 gallon tank was installed in 1980 to store waste oil from the various compressor stations throughout the Rouge Complex. The material is removed bi-monthly by licensed vendors for disposal off-site. The waste consists of a mixture of oil and water and is not a hazardous waste, but may contain hazardous constituents.

DEMPSTER CONTAINERS & TANKS (21)

Waste oils are accumulated in open Dempster containers and Dempster tanks at location A-39, Cold Rolling Mills; at the J-9 Shop area; and at the Hilo Repair Shop area. The waste is also collected in tanks at the Slabbing Mill, and at the Hot Strip Mill scale pit areas. The waste consists of general tramp oil generated from bearing leakage, rustproofing oil run-off, crankcase oils, etc. The containers are pumped out daily by licensed vendors for disposal off-site. The waste is not a hazardous waste, but may contain hazardous constituents.

SPENT MOLD FOUNDRY SAND (22)

The Rouge Steel Company Mold Foundry operated for a period from 1962 to 1985. The facility was used to manufacture the molds and stools required in the manufacture of steel ingots produced by the basic oxygen furnaces, and electric arc furnaces. To produce the molds and stools, molten blast furnace iron was poured into sand molds and allowed to solidify in conformance with typical foundry practice. After solidification the cheek (sand holder) was removed and the sand allowed to pour out. The spent sand was removed for off-site disposal. The castings were taken to the EE building in the Rouge Area for cleaning. The refuse from this cleaning operation was also removed for off-site disposal. The material was not considered to be a hazardous waste. Any hazardous constituents which this waste may have contained were not believed to have been present at meaningful levels.

BLAST FURNACE WASTE WATER TREATMENT PLANT (23)

This facility was placed in operation in 1980 to treat the blowdown water from the blast furnace cooling water. This blowdown water contains traces of ammonia, cyanide and phenol which are destroyed by means of alkaline chlorination, using sodium hypochlorite as the chlorinating agent in two oxidation tanks in tandem. After chlorination, any residual chlorine is reduced using sodium bisulfite as a reducing agent. The waste water is discharged through Outfall 004B, under the authority of N.P.D.E.S. Permit No. MI0043524. Prior to discharge the waste is filtered through two dual media (anthracite and sand) deep bed filters. Initially the waste is treated in six clarifiers to remove the suspended solids. The solids are dewatered in a vacuum filter for off-site disposal; the filtrate is returned to the clarifiers for further treatment. The back wash from the deep bed filters is returned to a solids thickener for further treatment. None of the waste water is stored prior to discharge into the Rouge River.

COLD MILL WASTE PICKLE LIQUOR (24)

Waste pickle liquor is generated during the hydrochloric acid pickling process to remove scale from steel sheet. The waste from the Rouge Steel Company Nos. 1, 2 and 3 Pickle Lines is collected in the holding tank adjacent to No. 1 Pickle Line while the waste from No. 4 Pickle Line is collected in a holding tank adjacent to the No. 4 line. Both holding tanks are periodically pumped to three 40,000 gallon storage tanks located immediately west of the pickle line area outside of the building. The waste is removed daily for off-site disposal by licensed vendors. The material is listed as a hazardous waste (K062). Pursuant to 40 CFR 262.34, a RCRA storage permit is not required.

POTENTIAL RELEASES

Potential releases of the above wastes could occur during the operation which generates the waste, during loading of the materials into vehicles for removal from the plant, or during transportation to the disposal or treatment facility. The releases could be to the air, as in the case of dusts, or to the surface waters, as in the case of wastewater treatment plant by-passes.

A Spill Prevention Control and Countermeasure/Pollution Incident Prevention Plan (SPCC/PIPP) is in effect to address these issues, and establishes appropriate emergency procedures. To the best of our knowledge and belief, no releases from SWMU's have occurred which would require activation of the procedures outlined in the above mentioned plans.

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SSECO

Exhibit VI

EPA Notification of Hazardous Waste Site

United States
Environmental Protection
Agency
Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: FORD MOTOR COMPANY
Street: ONE PARKLANE BLVD, STE 628-W
City: DEARBORN State: MI Zip Code: 48126

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site: ROUGE PLANT
Street: 3001 MILLER RD
City: DEARBORN County: WAYNE State: MI Zip Code: 48121

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): HOUSTON A B M
Phone: (313) 594-0324

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1915 To (Year): 1956

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. [X] Organics
2. [X] Inorganics
3. [X] Solvents
4. [ ] Pesticides
5. [ ] Heavy metals
6. [ ] Acids
7. [ ] Bases
8. [ ] PCBs
9. [ ] Mixed Municipal Waste
10. [X] Unknown
11. [ ] Other (Specify)
STEEL OPN TAR SLUDGE
AMMONIA STILL WASTES

Source of Waste:
Place an X in the appropriate boxes.

1. [ ] Mining
2. [ ] Construction
3. [ ] Textiles
4. [ ] Fertilizer
5. [ ] Paper Printing
6. [ ] Leather Tanning
7. [ ] Iron Steel Foundry
8. [ ] Chemical, General
9. [ ] Plating/Polishing
10. [ ] Military/Ammunition
11. [ ] Electrical Conductors
12. [ ] Transformers
13. [ ] Utility Companies
14. [ ] Sanitary/Refuse
15. [ ] Photofinish
16. [ ] Lab Hospital
17. [ ] Unknown
18. [ ] Other (Specify)
MFG & ASSEMBLY OF AUTOMOBILES & COMPONENTS

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

Notification of Hazardous Waste Site — Side Two

F Waste Quantity

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

Cubic feet: UNKNOWN

Gallons: _____

Total Facility Area

Square feet: _____

Acres: UNKNOWN

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☒ Suspected ☐ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

SEE ATTACHED SKETCH

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other."

Name: A. B.M. HOUSTON

Street: ONE PARKLANE BLVD, STE 628-W

City: DEARBORN State: MI Zip Code: 48126

Signature: A B M Houston Date: June 9, 81

- ☒ Owner, Present
- ☐ Owner, Past
- ☐ Transporter
- ☒ Operator, Present
- ☐ Operator, Past
- ☐ Other

[FR Doc. 81-11588 Filed 4-14-81; 8:45 am]

BILLING CODE 6560-26-C

EPA I.D. Number - MID 087738431

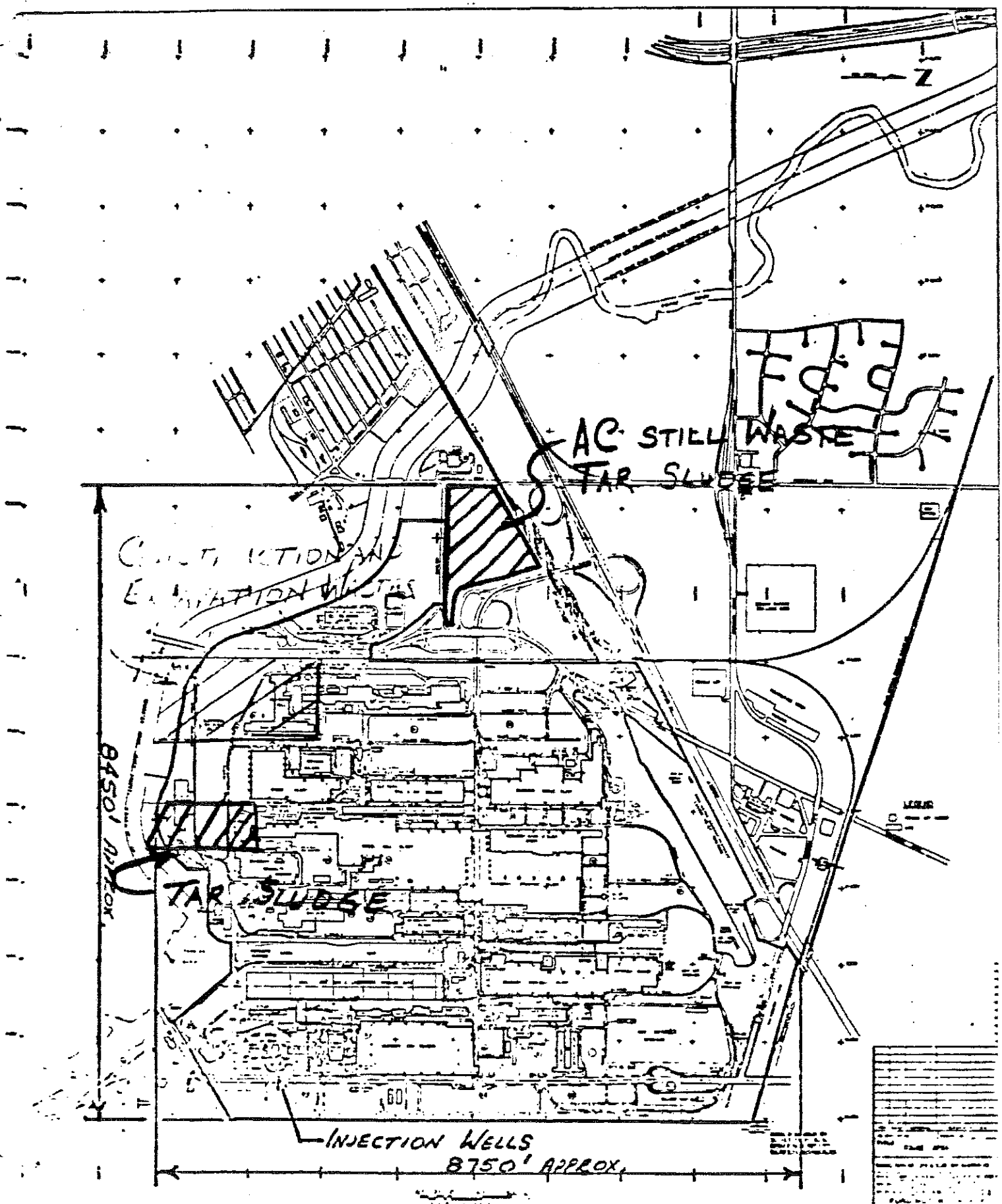

EXHIBIT V
ROUGE STEEL COMPANY
DEEP DISPOSAL WELL PERMIT
NUMBER MI-163-1W-0002

LEGEND

1. WASTE MATERIAL ACCUMULATION PILE
2. LADLE DUMPING PIT - PIG CAST
3. LIME SETTLING PIT - PIG CAST
4. DEMINERALIZER EFFLUENT - POWER HOUSE
5. FLY ASH REMOVAL SYSTEM - POWER HOUSE
6. BOTTOM ASH REMOVAL SYSTEM - POWER HOUSE
7. FINE AND COARSE DUST - BOF
8. LADLE DUMPING OPERATION - BOF
9. ELECTRIC ARC FURNACE BAGHOUSE DUST STORAGE SILO
10. COKE OVEN GAS HOLDER WASTE TANKS
11. GG BUILDING COAL PICKING REFUSE
12. COKE OVEN GAS LINE DRIP WATER
13. COKE OVEN REFRACTORY REFUSE
14. COKE OVEN TAR DECANTER SLUDGE
15. AC STILL BOTTOMS HOLDING LAGOON
16. COKE OVEN DEEP DISPOSAL WELL
17. COKE OVEN LITE OIL MUCK TANK
18. COKE OVEN BIOLOGICAL TREATMENT PLANT
19. PCB STORAGE BUILDINGS
20. UNDERGROUND STORAGE TANK - WASTE OIL
21. DEMPSTER CONTAINERS AND TANKS
22. SPENT MOLD FOUNDRY SAND
23. BLAST FURNACE WASTE WATER TREATMENT PLANT
24. COLD MILL WASTE PICKLE LIQUOR

Adapted from "United States Department of Interior Geoligical survey, Dearborn Quadrangle, Michigan - Wayne County, 7.5 Minute Series (Topographic)."

Scale 1" = 200'

Facility Management Plan
Attachment 20 Summary
Rouge Steel Company
Dearborn, Michigan
MID 087 738 431

Background

The Rouge Steel Company, formerly Ford Motor Company-Steel Division, operates underground injection wells (UIC) and also operates as a generator of hazardous waste. The company has submitted a Part A application for the UIC wells. Because the company has operated as a generator and a TSD, they must revise their Part A application to include all present hazardous waste management activities.

According to a recent RCRA inspection, the company is currently injecting D003 waste and generating unknown quantities of F003, K061 and K062 wastes. The facility was also operating an unlined surface impoundment (approximately 1,800 cubic feet) in which they treated tar pitch before shipping for off-site disposal. The surface impoundment operation has been discontinued but must still go through formal closure. No closure plan has been submitted to the MDNR or U.S. EPA as of this date.

Environmental Significance

Rouge Steel Company is an environmentally significant facility. On February 19, 1982, the company received a cease and desist order, from the MDNR, for disposing of hazardous waste (leachate from the Ford Allen Park Clay Mine) in the UIC wells until an appropriate Act 64 license was obtained by the company. On March 14, 1986, an inspection was conducted by the MDNR and U.S. EPA in which an unlined surface impoundment, used for treating hazardous waste, was discovered. The surface impoundment has not been identified on the Part A application.

No groundwater monitoring under RCRA has been conducted at the site.

Recommendations

A preliminary assessment and site investigation (PA/SI) should be carried out at the facility. During the PA, a complete file search needs to be conducted to document any past solid waste management problems and to check for the presence of solid waste management units. During the SI a visual check of the facility will be needed to assist in confirming any past releases or past solid waste management areas. A hydrogeologic investigation may be required to assure a clean closure for the site.

A fully completed Attachment 20 and a finalized FMP will be submitted upon completion of the PA/SI.

Enforcement action may be required to identify hazardous waste management facilities on the Part A, to have closure plans submitted and to establish the required groundwater monitoring/hydrogeologic report.

11/15/85 Attachment 20

Name of Preparer: Jim Roberts
Date: 4/28/86

Model Facility Management Plan

1. Facility Name: Rouge Steel Company

2. Facility I.D. Number: MID 087 738 431

3. Owner and/or Operator: Rouge Steel Company, Ford

4. Facility Location: 3001 Miller Rd
Street Address

Dearborn (City) Wayne (County) MI (State) 48121-1699 (Zip Code)

5. Facility Telephone (if available): (313) 322-3000

6. Interim Status and/or Permitted Hazardous Waste Units and Capacities of Each Unit:

Type of Units	Size or Capacity	Active or Closed
____ Storage in Tanks or Containers		
____ Incinerator		
____ Landfill		
____ Surface Impoundment		
____ Waste Pile		
____ Land Treatment		
____ Injection Wells		
X Others (Specify) UIC		

7. Permit Application Status: _____ (HWDMS action item number)

8. Identification of Hazardous Waste Generated, Treated, Stored or Disposed at the Facility: (may attach Part A or permit list or reference those documents if listing of wastes is exceptionally long - in that case, to complete this question list wastes of greatest interest and/or quantity and note that additional wastes are managed)

Type of Waste	Quantity	Generated, Treated, Stored or Disposed (note appropriate categories)
D003	53,000,000 Tons/yr	injection well, Treatment prior to disposal
~~D003~~		
F003	?	shipped off site for disposal } generator
K061	?	shipped off site for disposal } generator
K062	?	off site Disposal } generator

9. Review of Response to Solid Waste Management Questionaire indicates: (check one)

_____ Solid Waste Management Units exist (other than previously identified RCRA units)

No response on file

_____ No Solid Waste Management Units exist (other than previously identified RCRA units)

_____ It is unclear from review of questionaire whether or not any solid Waste Management Units exist

_____ Respondent indicates that does not know if any Solid Waste Management Units exist

10. If the response to question 9 is that Solid Waste Management Units exist, than check one of the following:

_____ Releases of hazardous waste or constituents have occurred or are thought to have occurred

No response on file

_____ Releases of hazardous waste or constituents have not occurred

_____ Releases of hazardous waste or constituents have occurred or are thought to have occurred but have been adequately remedied

_____ It is not known whether a release of hazardous waste or constituents has occurred

11. The facility is on the National Priorities List or proposed update of the List or ERRIS list

_____ Yes - indicate List or update

__X__ No

_____ Yes - ERRIS list

Prior to completion of the Recommendation portion of the Facility Management Plan, the attached Appendix must be completed.

12. Recommendation for Regional Approach to the Facility: Check one

__X__ Further Investigation to Evaluate Facility

_____ Permit Compliance Schedule

_____ Corrective Action Order (may include compliance schedule)

_____ Other Administrative Enforcement

_____ Federal Judicial Enforcement

_____ Referral to CERCLA for Federally Financed or Enforcement Activity

_____ Voluntary/Negotiated Action

_____ State Action

Brief narrative in explanation of selection : _____

_____

_____

_____

a) If further investigation alternative is selected:

__X__ Site inspection - anticipated inspection date _____

State or Federal inspection _____

__X__ Preliminary Assessment - anticipated completion date _____

_____ RI/FS - anticipated date of initiation _____

State/Federal_____

Private Party_____ identify party(ies)

_____

) If Permit Alternative is Selected: Projected Schedule

Date of Part B Submission: _____

Date of Completeness Check: _____

Date for Additional Submissions (if required): _____

Date of Completion of Technical Review: _____

Completion of Draft Permit/Permit Denial: _____

Public Notice for Permit Decision: _____

Date of Hearing (if appropriate): _____

Date for Final Permit or Denial Issuance: _____

Description of any corrective action provisions to be included in permit -

_____

_____

_____

c) If Corrective Action Order Alternative is Selected:

Estimated Date for Order Issuance: _____

Description of Provisions of the Order to be Completed by Facility: _____

_____

_____

Description of Compliance Schedule to be Contained in Order:

_____

_____

_____

d) If Other Administrative Enforcement Action is Selected:

Projected Date for Issuance of the Order: _____

Description of Provisions or Goals of the Order: _____

_____

_____

e) If Judicial Enforcement Alternative Selected:

Date of Referral to Office of Regional Counsel:_____

f) If Referral to CERCLA for Action Selected:

Date of Referral to CERCLA Sections:_____

g) If Voluntary/Negotiated Action Alternative if Selected:

Date of Initial Contact with Facility:_____

Description of Goals of Contact or Discussions with Facility: _____

_____

_____

_____

Date for Termination of Discussions if Not Successful:

_____

Date of Finalization of Settlement if Negotiation Successful:

_____

h) If State Action Alternative is Selected:

Date for Referral to State:_____

Name of State Contact:_____

Phone: _____

APPENDIX

The questions constituting this Appendix to the Facility Management Plan must be filled out prior to completion of recommendation elements of the Plan. The purpose of this appendix is to provide a summary documentation of the State and/or U.S.EPA review of available information on the subject facility. The intent is that a comprehensive file review will be conducted as the basis for selection of the recommended approach to a given facility. If the Appendix is completed by State personnel questions referring to available data reference information in State files; for Federal personnel the reference is to Federal files. Where questions refer to "all" available data or information and such material is voluminous, the response should indicate that files are voluminous, and then reference most telling information, for example groundwater contaminants found frequently or at extremely high concentrations should be specifically listed, and information most directly supporting recommended approach to facility should be described. If no information is available in facility files, the response should so indicate. It is also anticipated that this Appendix may be updated periodically as more information becomes available.

1. Description of All Available Monitoring Data for Facility:

Type of Data	Date	Author	Summary of Results or Conclusions

To be submitted with RI/FS

2. Description of Enforcement Status:

Type of Action	Date	Local, State or Federal	Result or Status

To be submitted with RI/FS

3. Description of Any Complaints from Public:

Source of Complaint	Date	Recipient	Subject and Response

To be submitted with PA/SI

4. Description of All Inspection Reports for Facility:

Date of Inspection	Inspector (Local, State, Federal)	Conclusions or Comments

To be submitted with PA/SI

5. During inspection of this facility did the inspector note any evidence of past disposal practices not currently regulated under RCRA such as piles of waste or rubbish, injection wells, ponds or surface impoundments that might contain waste or active or inactive landfills?

_____ Yes - give date if inspection and describe observation

_____

_____

_____

_____ Don't know

_____ No

To be submitted with PA/SI

6. Do inspection reports indicate observations of discolored soils or dead vegetation that might be caused by a spill, discharge or disposal of hazardous wastes or constituents?

_____ Yes - indicate date of report and describe observations

_____

_____

_____ No To be submitted with PA/SI

_____ Don't know

7. Do inspection reports indicate the presence of any tanks at the facility which are located below grade and could possibly leak without being noticed by visual observation?

_____ Yes - date of inspection and describe information in report

_____

_____

_____

_____ No To be submitted with PA/SI

_____ Don't know

8. Does a groundwater monitoring system exist at the facility? No RCRA monitoring

9. If answer to question 8 is yes, is the groundwater system capable of monitoring both regulated RCRA units and other Solid Waste Management Units? _____

Explain - _____

_____

_____

10. Is the groundwater monitoring system in compliance with applicable RCRA groundwater monitoring standards? _____

If no, explain deficiency _____

_____

_____

11. Decribe all information on facility subsurface geology or hydrogeology available.

Type of Information	Author	Date	Summary of Conclusions

12. Did the facility submit a 103(c) notification pursuant to CERCLA?

____ Yes Date of Notification_____

____ No To be submitted with PA/SI

13. If answer to 12 is yes, briefly summarize content of that notification. (waste management units identified, type of waste concerned)

To be submitted with PA/SI

14. Has a CERCLA Preliminary Assessment/Site Investigation (PA/SI) been completed for this facility?

_____ Yes

_____ No To be submitted with PA/SI

15. If answer to question 14 is yes, briefly describe conclusions of the PA/SI focusing on types of environmental contamination found, wastes and sources of contamination.

To be submitted with PA/SI

16. If available, having reviewed the CERCLA notification, RCRA Part A and RCRA Part B, it appears that: (CERCLA unit refers to unit or area of concern in CERCLA response activity)

_____ RCRA and CERCLA units are same at this facility

_____ RCRA and CERCLA units are clearly different units

_____ There is an overlap between the RCRA and CERCLA units (some are the same, some are different)

To be submitted with PA/SI

17. Description of Any Past Releases or Environmental Contamination:

Type/Source of Release	Date	Material Released	Quantity	Response

To be submitted with PA/SI

18. Identification of Reports or Documentation Concerning Each Release Described in Item 17.

Title/Type of Report	Date	Author	Recipients	Contents

To be submitted with PA/SI

19. Highlight any information gaps in the file - describe any plans to obtain additional needed information.

To be submitted with PA/SI

20. Summary of major environmental problems noted, desired solution and possible approaches.

Problem	Solution	Approach	Pros and Cons

To be submitted with PA/SI

P
already did
PA/SI

ROUGE STEEL COMPANY

3001 Miller Road
P. O. Box 1631
Dearborn, Michigan 48121-1631

January 15, 1986

RCRA Activities
Region V
P. O. Box A3587
Chicago, Illinois 60690

Attention: ATKJG

Gentlemen:

Rouge Steel Company received the attached Certification Statement on January 14, 1986, and is returning it unsigned.

The Company has applied for, and received a permit to operate an underground injection well at the Rouge Manufacturing Complex (Permit No. MI-163-1W-0002). One of the permit conditions was to submit a corrective action program for continuing releases of hazardous waste or hazardous waste constituents. The preliminary assessment was submitted on January 3, 1986, to the following address:

Mr. Charles H. Sutfin
Director, Water Division
U.S. EPA, Region V
230 South Dearborn Street
Chicago, Illinois 60604

Rouge believes that a second submission of the same material should not be required, and that the previous submission complies with the 1984 Amendments.

Very truly yours,

Gerald Doroshewitz

Gerald Doroshewitz
Supv., Control & Liaison
Environmental Control

attachment

cc: Mr. Charles H. Sutfin

CERTIFICATION REGARDING POTENTIAL RELEASES FROM
SOLID WASTE MANAGEMENT UNITS

FACILITY NAME: _____

EPA I.D. NUMBER: _____

LOCATION CITY: _____

STATE: _____

1. Are there any of the following solid waste management units (existing or closed) at your facility? NOTE - DO NOT INCLUDE HAZARDOUS WASTE UNITS CURRENTLY SHOWN IN YOUR PART A APPLICATION

	YES	NO
° Landfill	____	____
° Surface Impoundment	____	____
° Land Farm	____	____
° Waste Pile	____	____
° Incinerator	____	____
° Storage Tank (Above Ground)	____	____
° Storage Tank (Underground)	____	____
° Container Storage Area	____	____
° Injection Wells	____	____
° Wastewater Treatment Units	____	____
° Transfer Stations	____	____
° Waste Recycling Operations	____	____
° Waste Treatment, Detoxification	____	____
° Other _____		

2. If there are "Yes" answers to any of the items in Number 1 above, please provide a description of the wastes that were stored, treated or disposed of in each unit. In particular, please focus on whether or not the wastes would be considered as hazardous wastes or hazardous constituents under RCRA. Also include any available data on quantities or volume of wastes disposed of and the dates of disposal. Please also provide a description of each unit and include capacity, dimensions and location at facility. Provide a site plan if available.

_____

_____

_____

_____

_____

NOTE: Hazardous wastes are those identified in 40 CFR 261. Hazardous constituents are those listed in Appendix VIII of 40 CFR Part 261.

3. For the units noted in Number 1 above and also those hazardous waste units in your Part A application, please describe for each unit any data available on any prior or current releases of hazardous wastes or constituents to the environment that may have occurred in the past or may still be occurring.

   Please provide the following information

   a. Date of release
   b. Type of waste released
   c. Quantity or volume of waste released
   d. Describe nature of release (i.e., spill, overflow, ruptured pipe or tank, etc.)

4. In regard to the prior or continuing releases described in Number 3 above, please provide (for each unit) any analytical data that may be available which would describe the nature and extent of environmental contamination that exists as a result of such releases. Please focus on concentrations of hazardous wastes or constituents present in contaminated soil or groundwater.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the submittal is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (42 U.S.C. 6902 et seq. and 40 CFR 270.11(d))

Typed Name and Title

Signature

Date

CONTINUING RELEASES AT PERMITTED FACILITIES

SEC. 206. Section 3004 of the Solid Waste Disposal Act is amended by adding the following new subsection after subsection (t) thereof:

"(u) CONTINUING RELEASES AT PERMITTED FACILITIES.—Standards promulgated under this section shall require, and a permit issued after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit under this subtitle, regardless of the time at which waste was placed in such unit. Permits issued under section 3005 shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.".

ORIG: KEN/C&E FILE

ROUGE STEEL COMPANY

3001 Miller Road
P. O. Box 1699
Dearborn, Michigan 48121-1699

U. S. Environmental Protection Agency
Region V 5HE-12
230 South Dearborn Street
Chicago, Illinois 60604

NOV 14 1985

HAZARDOUS WASTE

Subject: Rouge Steel Company
EPA ID No.: MID 087 738 431
Interim Status Certification

RCRA Activities:

As required by section 3005(e) of the Hazardous and Solid Waste Disposal Act, the following is the certification statement for the subject facility. A federal Underground Injection Control (UIC) permit was issued by EPA on October 11, 1985, with an effective date of October 30, 1985.

CERTIFICATION STATEMENT

Rouge Steel Company is the owner/operator of the No. 2 deep well EPA ID No. MID 087738431 located at 3001 Miller Road, Dearborn, Michigan, 48120.

I, P. T. Sullivan, as the President of the Rouge Steel Company, certify that the No. 2 deep well at this facility, as identified on the attached topography map, is in compliance with 40 CFR 144.28(g)(1)(iii), ground-water monitoring requirements, where applicable, and 40 CFR 144 Subpart F, financial responsibility requirements, Please note the following.

1. Rouge Steel Company has not been required to install and use groundwater monitoring wells pursuant to 40 CFR 144.28(g)(1)(iii).

2. Pursuant to 40 CFR 144.16, an application to waive groundwater monitoring for this facility was submitted to EPA on August 19, 1985.

I, P. T. Sullivan, President of the Rouge Steel Company, located at 3001 Miller Road, Dearborn, Michigan, 48120, knowingly and willfully make this true and accurate certification to the United States Environmental Protection Agency pursuant to section 3005(e) of the Hazardous and Solid Waste Disposal Act, as amended.

Signature P. T. Sullivan

P. T. Sullivan
President
Rouge Steel Company

Date 10-31-85